AD0504045AE

Portable CD Player

SL-CT720GC

Colours
(A).....Blue Type
(S).....Silver Type

Please use this manual together with the service manual for Model No. SL-CT720GD/SG, Order No. AD0409064C0.

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1. Note

- This simplified service manual is provided to indicate the differences between the original model No. SL-CT720SG-S and the subsequent model No. SL-CT720GC-A/S.

2. Replacement Parts List

Note:

- Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacture's specified parts shown in the parts list.

- The parenthesized indications in Remarks columns specify the colours.
(A): Blue Type
(S): Silver Type

- All parts are supplied by SPC.

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Ref.No.	Change of Parts No.		Part Name & Description	Pcs	I
	SL-CT720SG-S	SL-CT720GC-A/S			
CABINET PARTS					
6	RYK1400-S	RYK1400-A	BOTTOM CABINET	1	(A
7	RYF0729-S	RYF0729-A	CD LID UNIT	1	(A
9	RYK1399-S	RYK1399-1S	MIDDLE CABINET	1	(S
18	RKK0155A-2H	RKK0155A-1H	BATTERY LID	1	(S
24	RGU2334-S	RGU2334-2S	BUTTON,OPEN	1	(S
Accessory Parts					
A1	RFKFHFAZ09EM	RFKFHFAZ01E1	RECHARGEABLE BATTERIES	2	
A8	RQT7725-Z	---	OPERATING INSTRUCTIONS	1	DE
A8	---	RQT7724-A	OPERATING INSTRUCTIONS	1	AD AF
A10	RQCA1146	---	SHEET (FOR POWER PLUG ADAPTOR)	1	DE

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AD0409064C0

Portable CD Player

SL-CT720GD / SL-CT720SG

Colours

(A).....Blue Type
(D).....Orange Type [SL-CT720SG only]
(P).....Pink Type [SL-CT720SG only]
(S).....Silver Type

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SPECIFICATIONS

Specifications

Audio (CD-DA)
Sampling frequency: 44.1 kHz
No. of channels: 2 channels (left and right, stereo)
Headphones output level: RMS max. 6 mW+6 mW/16 Ω (adjustable)
Frequency response: 20 to 20,000 Hz (+0 dB to –1.5 dB)
Output voltage: 0.6 Vrms (50 kΩ)
S/N: More than 96 dB
Wow and flutter: Below measurable limit
D/A converter: 1 bit, MASH
Pickup
Light source: Semiconductor laser
Wavelength: 780 nm

MP3
Supported bit rates: (Support variable bit rate)
32 kbps to 320 kbps
(128 kbps is recommended)
Supported sampling frequency: 48 kHz/44.1 kHz/32 kHz
Maximum number of items (total no. of albums and tracks): 999
Maximum album levels: 100

General
Operational temperature range: 0 – 40 degree
Rechargeable temperature range: 5 – 40 degree
Power supply:
DC input (via included AC adaptor); DC 4.5 V
AC adaptor input;
SL-CT720GD; AC 220 V, 60 Hz
SL-CT720SG; AC 110 -127/220 - 240 V, 50/60 Hz

Power consumption:
Using AC adaptor (MP3/CD-DA); 0.9 W/0.8 W
Recharging; 3.7 W
Play time:
Using on a flat stable surface at 25 degree, EQ is off, Hold is on, Anti-skip is on POS 1 (CD-DA), recommended bit rate (MP3:128 kbps), and the Digital Re-master is off (MP3). Play times are in hours and approximate.
Batteries used: MP3 disc/CD-DA disc
2 alkaline batteries (LR6); Approx. 120/70 h
2 supplied rechargeable batteries; Approx. 50/28 h
2 supplied rechargeable and 2 alkaline batteries; Approx. 170/100 h
• The play time may be less depending on the operating conditions.
• Play time will be considerably reduced when playing CD-RW.
Recharging time: Approx. 3 to 4 h
Dimensions (W × H × D): 136.4x16.1x136.4 mm
Mass: 200 g (with batteries)
154 g (without batteries)

Notes: Specifications are subject to change without notice.
Mass and dimensions are approximate.

Note on CD-R and CD-RW (CD-DA/MP3 only)
For CD-DA format, use a music disc and finalize* it after recording. The unit may not be able to play some discs due to the condition of the recording.
* A process performed after recording that enables CD-R/CD-RW players to play audio CD-R and CD-RW.

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1. Accessories

- AC adaptor for SL-CT720GD
(RFEA438Q-S).....1 pc.
- AC adaptor for SL-CT720SG
(RFEA444Z-S).....1 pc.
- Stereo earphones
(L0BAB0000190).....1 pc.
- Wired remote control
(N2QCBD000046).....1 pc.
- External battery case
(RFA2666-H).....1 pc.
- Soft case
(RFC0071A-C).....1 pc.
- Rechargeable batteries (with case)
(RFKFHFAZ09EM).....2 pcs.
- Power plug adaptor for SL-CT720SG only
(K2DA42E00001).....1 pc.

2. Location of Controls

3. Precaution of Laser Diode

Caution:

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This product utilizes a laser diode with the unit turned on, invisible laser radiation is emitted from the pick-up lens.
Wavelength: 780 nm
Maximum output radiation power from pick-up: 100 μ W/VDE
Laser radiation from the pick-up lens is safety level, but be sure the followings:

1. **Do not disassemble the optical pick-up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick-up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick-up lens for a long time.**

4. Handling Precautions for Traverse Deck

The laser diode in the traverse deck (optical pick-up) may break down due to potential difference caused by static electricity of clothes or human body.
So, be careful of electrostatic breakdown during repair of the traverse deck (optical pick-up).

4.1. Handling of traverse deck (optical pick-up)

1. **Do not subject the optical pick-up to static electricity as it is extremely sensitive to electrical shock.**
2. **To protect the laser diode against electrostatic breakdown, be sure that the short land of the flexible board (FFC board) should be short-circuit by solder before pulling out the FFC. Then inserting a short pin or similar object into the tipof the flexible board. / (Refer to Fig. 4-1.)**
3. **Take care not to apply excessive stress to the flexible board (FFC board).**
4. **Do not turn the variable resistor (laser power adjustment). It has already been adjusted. (Refer to Fig. 4-1.)**

Fig. 4-1.

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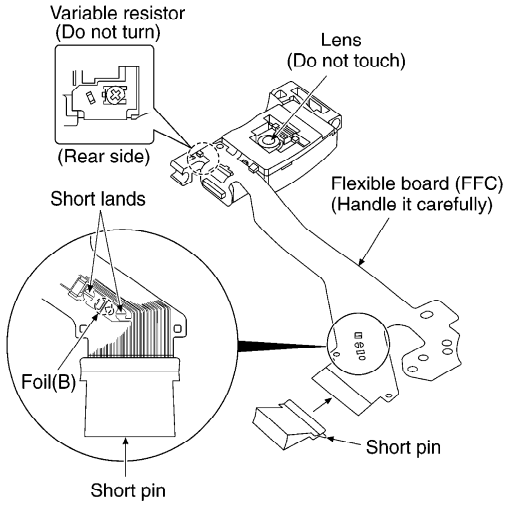


4.2. Caution when replacing traverse deck

The new traverse deck short-circuits by the short pin, the foil (B) and short lands to protect the laser diode against electrostatic breakdown. Be sure to replace to new one following procedures.

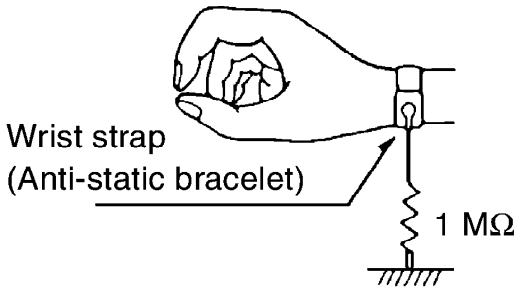
1. **Remove the short pin from the FFC, and then connect it to the connector.**
2. **Cut the foil (B). (Refer to Fig. 4-1.) (Take care not to make contact with cutting point each other.)**
3. **Unsolder the short lands. (Refer to Fig. 4-1.)**

4.3. Grounding for electrostatic breakdown prevention

4.3.1. Human body grounding

Use the anti-static wrist strap to discharge the static electricity from your body. (Refer to Fig. 4-2.)

Fig. 4-2.



4.3.2. Work table grounding

Put a conductive material (sheet) or steel sheet on the area where the traverse deck (optical pick -up) is placed, and ground the sheet. (Refer to Fig. 4-3.)

Fig. 4-3.

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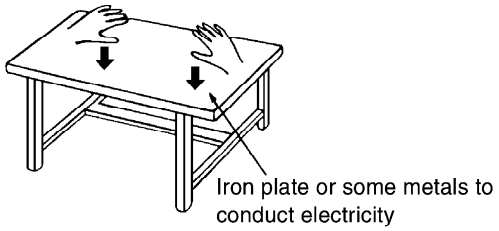


Caution:

The static electricity of your clothes will not be grounded through the wrist strap.
So take care not to let your clothes touch the traverse deck (optical pick-up).

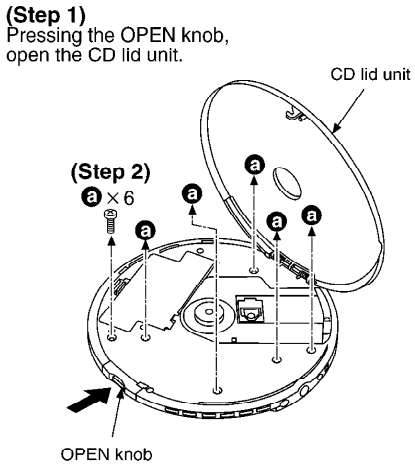
5. Operation Checks and Component Replacement / Procedures

- This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.

- For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

5.1. Checking for the P.C.B.

5.1.1. Checking for the P.C.B. (A side)



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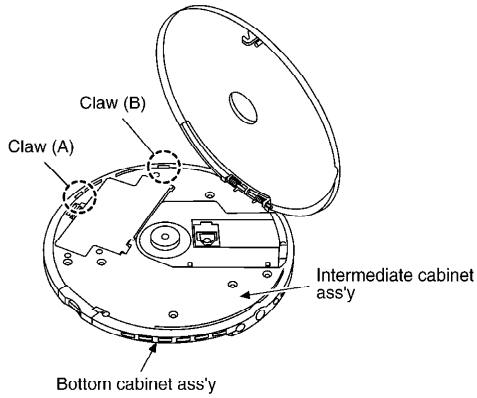
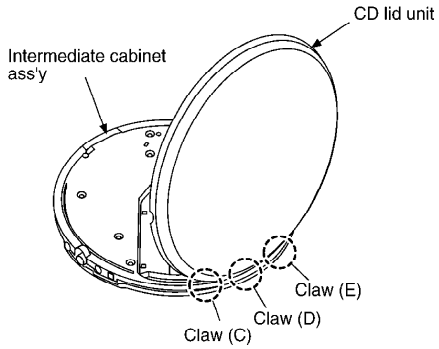
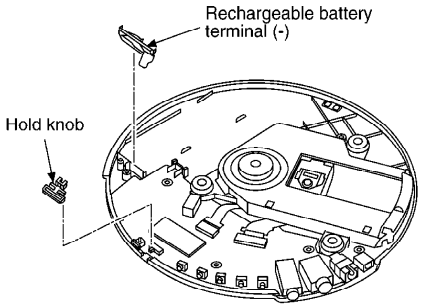
(Step 3)
Release the claws (A) and (B), and then spread the clearance between the bottom cabinet ass'y and intermediate cabinet ass'y manually.



(Step 4)
Release the claw (C), (D) and (E), and then remove the intermediate cabinet ass'y and CD lid unit.





NOTE:
Before checking, remove the hold knob and rechargeable battery terminal(-) so as not to come off.

- Check the P.C.B. (A side) as shown below.

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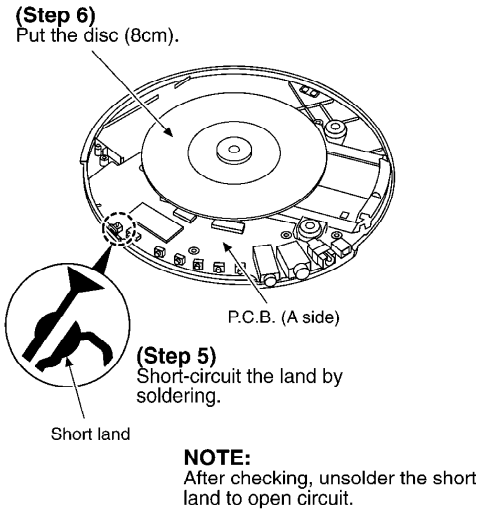
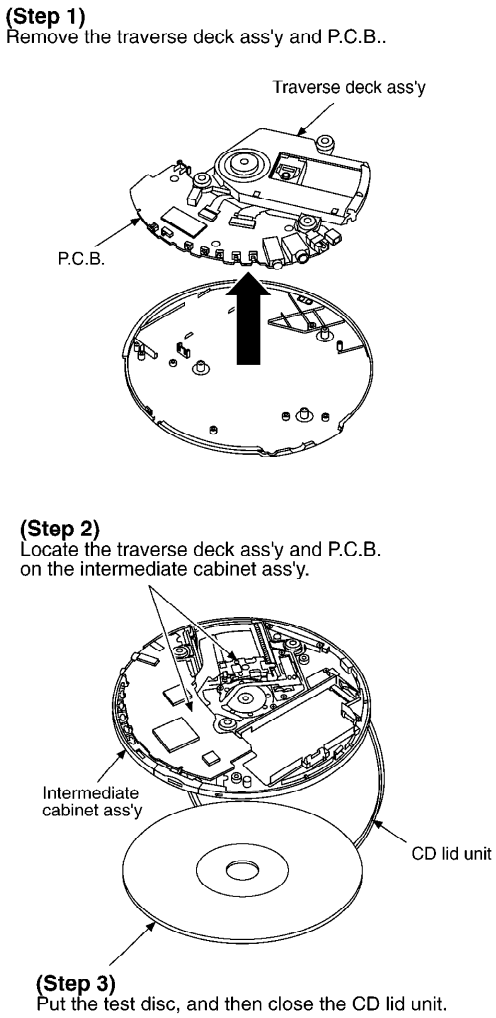


5.1.2. Checking for the P.C.B. (B side)

- Follow the (Step 1) - (Step 5) of item 5.1.1.


(Step 1)
Remove the traverse deck ass'y and P.C.B..
Traverse deck ass'y
P.C.B.
(Step 2)
Locate the traverse deck ass'y and P.C.B. on the intermediate cabinet ass'y.
Intermediate cabinet ass'y
CD lid unit
(Step 3)
Put the test disc, and then close the CD lid unit.

- Check the P.C.B. (B side) as shown below.

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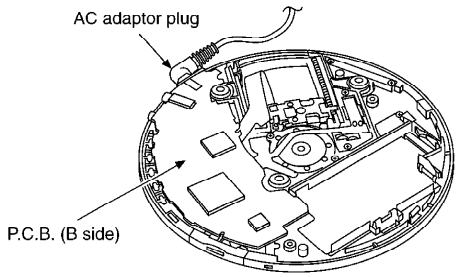
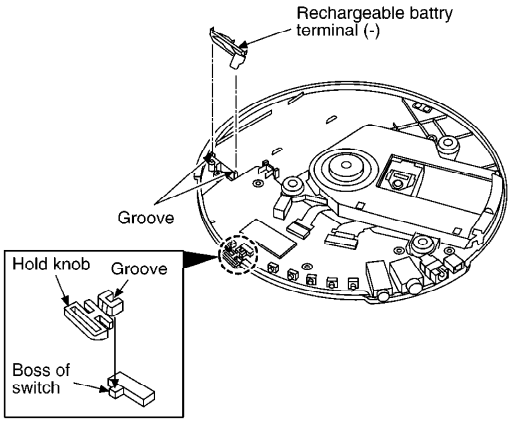


(Step 4)
Insert the AC adaptor plug into the DC IN jack, and then apply the power.

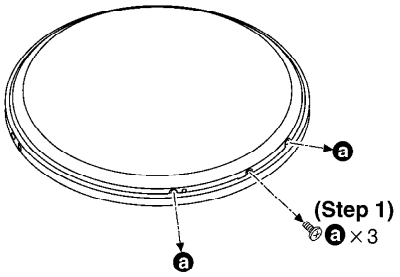
NOTE:
After checking, unsolder the short land to open circuit.

Notice for installation

1. Make sure the boss of switch is fitted in the hold knob.
2. Make sure the rechargeable battery terminal (-) is fitted in the groove.



5.2. Replacement for the CD lid unit, shaft plate, spring A and spring B



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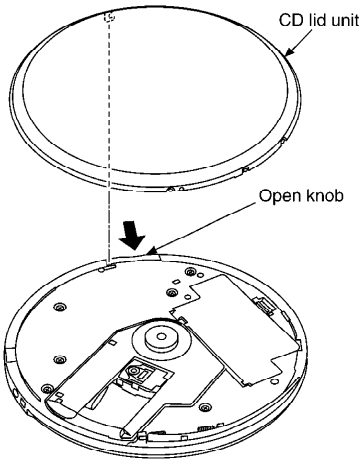
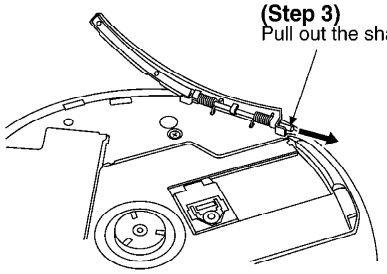
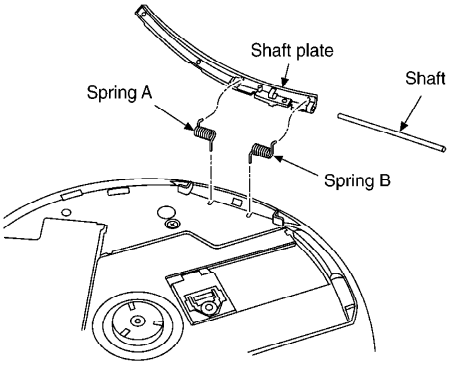
(Step 2)
Push the open knob, and then remove the CD lid unit.



(Step 3)
Pull out the shaft.



(Step 4)
Spring A and B can be removed after pulling out the shaft.



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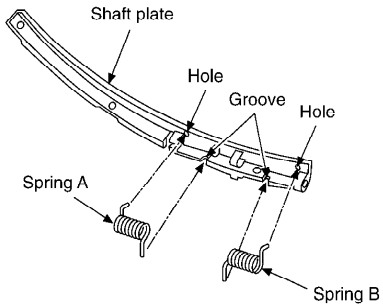
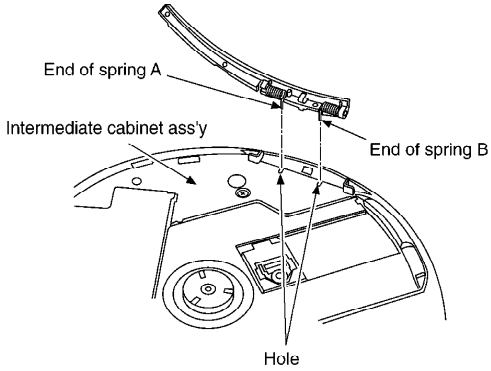
Installation of shaft plate, spring A and B

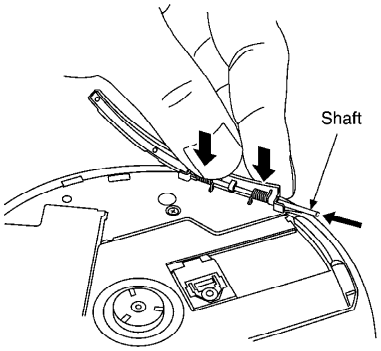
(Step 1)
Insert the spring A and B into the hole and groove of shaft plate respectively.



(Step 2)
Insert the ends of spring A and B into the hole of intermediate cabinet ass'y respectively.



(Step 3)
Attach the shaft by pressing with your fingers so that the springs do not pop out.



5.3. Replacement for the traverse motor and optical pick-up

- Follow the (Step 1) - (Step 4) of item 5.1.1.

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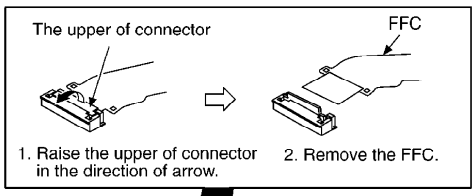
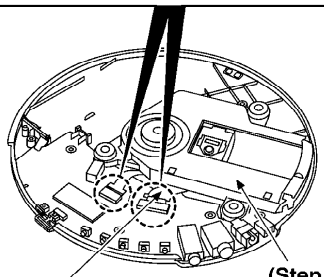
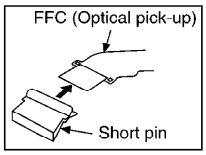
(Step 1)
Pull out the FFC from connector (2 points).



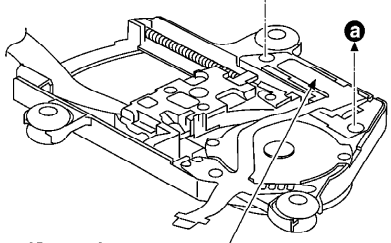


(Step 2)
Remove the traverse deck ass'y.

NOTE:
Insert a short pin into the traverse deck's FFC.
(Refer to "**Handling Precautions for Traverse Deck**".)

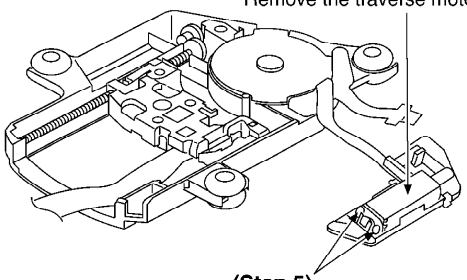


(Step 3)
ⓐ × 2



(Step 4)
Remove the holder and traverse motor.

(Step 6)
Remove the traverse motor.



(Step 5)
Unsolder (2 points).

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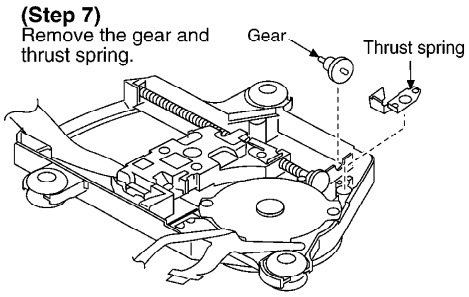

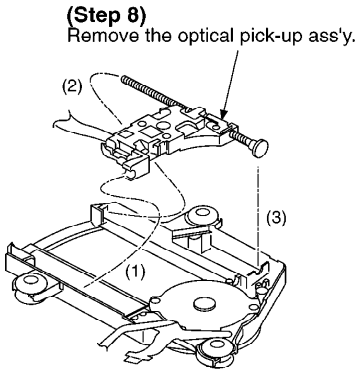

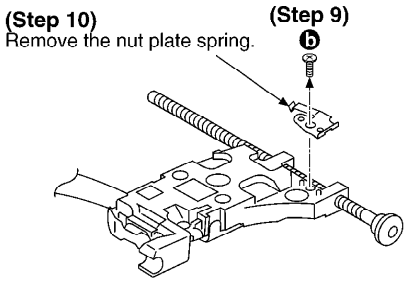

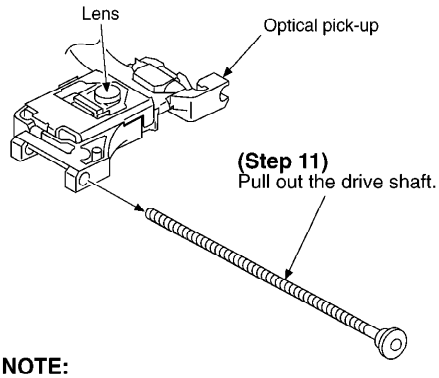

NOTE:
1. Use care to prevent damage the optical pick-up, due to the precision construction.
2. Do not apply the grease on the lens of optical pick-up.
3. Do not touch the lens of the optical pick-up.

5.4. Replacement for the rest switch

- Follow the (Step 1) - (Step 4) of item 5.1.1.

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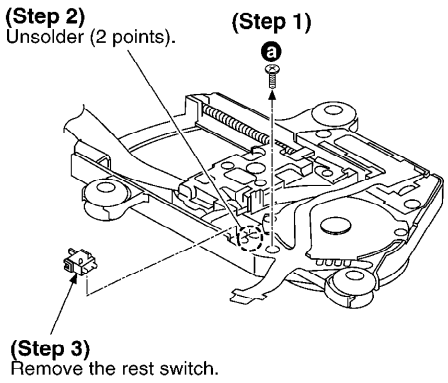
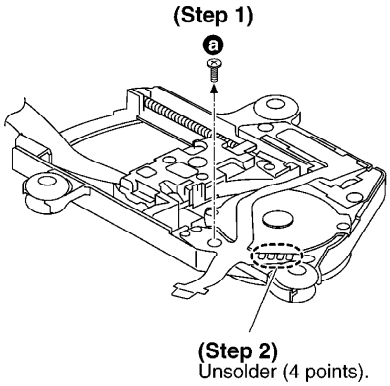
- Follow the (Step 1) , (Step 2) of item 5.3.

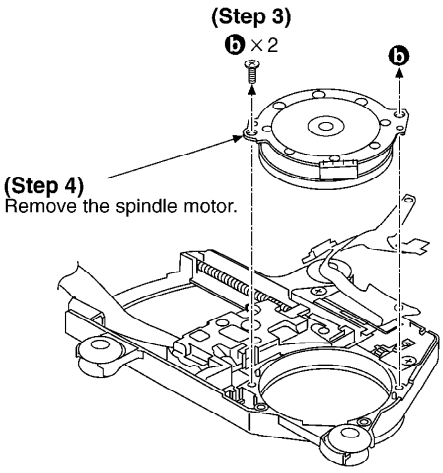


5.5. Replacement for the spindle motor

- Follow the (Step 1) - (Step 4) of item 5.1.1.

- Follow the (Step 1) , (Step 2) of item 5.3.





6. Display of Self-Diagnostic Function

This unit (SL-CT720) has self-diagnostic function. It may display below-mentioned on the remote control display.

- The substance of self-diagnostic display.

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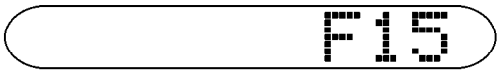
Remote control display



(Press PLAY and STOP button. After 15 seconds, it is displayed for 2 seconds.)

In case of this display, it may be causing for abnormally movements of traverse deck, touching failure of REST detect switch and coming off or cutting off the flexible P.C.B.. It is necessary for confirmation or repair and replacement each parts.

7. Checking the Operation Problems on the Traverse Deck (Optical Pick-up)

Make sure to follow the procedures below to check the operation problems of the traverse deck (optical pick-up) before replacing it.
Replace the traverse deck only after the problem is identified.

7.1. Check the operations described below on the traverse deck after replacing

7.1.1. Checking skip search

1. **Play an ordinary musical program disc.**
2. **Press the skip button to check for normal skip search operation (in both the forward and reverse directions).**

7.1.2. Checking manual search

1. **Play an ordinary musical program disc.**
2. **Press the manual search button to check for smooth manual search operation at either low or high speed (in both the forward and reverse directions).**

7.1.3. Checking playability

1. **Play the 0.7 mm black dot and the 0.7 mm wedge on the playability test disc (SZZP1054C) and verify that no sound skip or noise occurs.**
2. **Play the middle tracks of the uneven test disc (SZZP1056C) and verify that no sound skip or noise occurs.**

8. Automatic Adjustment Results Display Function / (Self-Check Function)

On the unit (SL-CT720), each automatic adjustment result are displayed on the remote control display. This function is convenient to check or identify which automatic adjustment circuit is

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incorrect.
The followings are the contents of the automatic adjustment result displays (Self-Check Function).

8.1. How to display automatic adjustment results

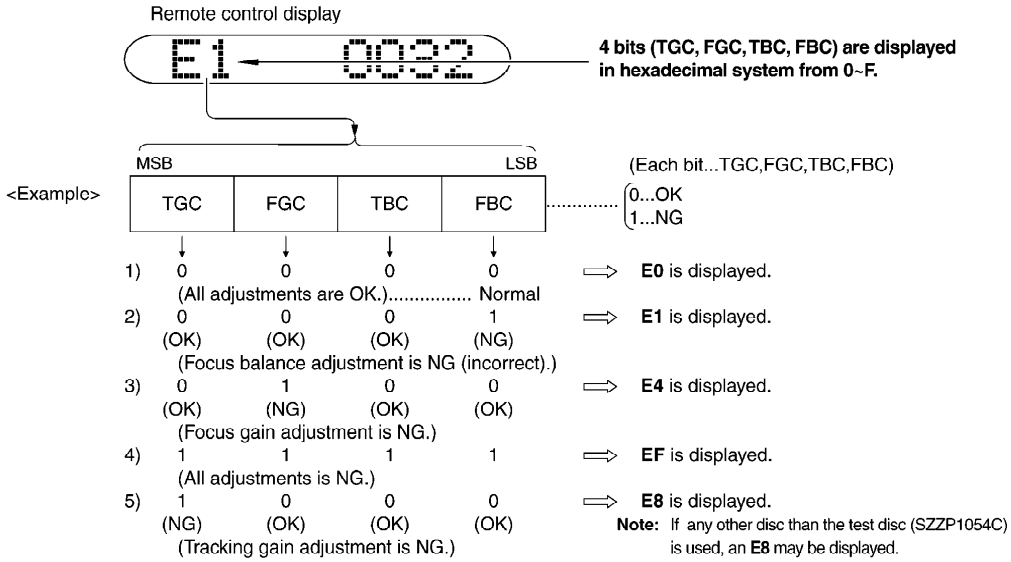
1. Load the test disc (SZZP1054C).

2. Press the ⏮ (SKIP/SEARCH) and ⏭ (SKIP/SEARCH) buttons simultaneously and hold them, and additionallypress the ⏯ (PLAY/PAUSE) button.

3. Press the ■ (STOP/TURN OFF) button once.

4. An automatic adjustment result is displayed on the remote control display.

8.2. Display of automatic adjustment results (Self-Check Function)


Remote control display
E1 0027
4 bits (TGC, FGC, TBC, FBC) are displayed in hexadecimal system from 0~F.
MSB
LSB
(Each bit...TGC,FGC,TBC,FBC)
<Example>
TGC
FGC
TBC
FBC
0...OK
1...NG
1) 0 0 0 0 ⇨ E0 is displayed.
(All adjustments are OK.)..... Normal
2) 0 0 0 1 ⇨ E1 is displayed.
(OK) (OK) (OK) (NG)
(Focus balance adjustment is NG (incorrect).)
3) 0 1 0 0 ⇨ E4 is displayed.
(OK) (NG) (OK) (OK)
(Focus gain adjustment is NG.)
4) 1 1 1 1 ⇨ EF is displayed.
(All adjustments is NG.)
5) 1 0 0 0 ⇨ E8 is displayed.
(NG) (OK) (OK) (OK)
(Tracking gain adjustment is NG.)
Note: If any other disc than the test disc (SZZP1054C) is used, an E8 may be displayed.

<Example>
Follow the below steps when E1 is displayed.
(Cause: Focus balance (FBC) is set beyond the limit.)
- Check if
1. the waveform or voltage of the focus servo circuit is correct, and
2. the optical pick-up returns to the normal state by exchanging the traverse deck.
Follow the below steps when E4 is displayed.
(Cause: Focus gain (FGC) is set beyond the limit.)
- Check if

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1. the waveform or voltage of the focus servo circuit is correct,
2. the focus coil of the optical pick-up is correct (around 8 ohms), and
3. the optical pick-up returns to the normal state by exchanging the traverse deck.

Follow the below steps when EF is displayed.
(Cause: All adjustments (TGC, FGC, TBC, FBC) are set beyond the limit.)

- Check if

1. the optical pick-up returns to the normal state by exchanging the traverse deck, and
2. the waveform or voltage of the servo ICs are correct.

Note:
It is not always necessary to exchange the traverse deck when an error message is displayed. Be sure to check if the circuit is defective or not before exchanging the traverse deck.

Note:
If any other disc than the test disc (SZZP1054C) is used, an error message may be displayed. This is not a malfunction.

9. Type Illustration of ICs, Transistors and Diodes

10. Schematic Diagram Notes

- This schematic diagram may be modified at any time with the development of new technology.

Notes:

S201:

Laser ON/OFF switch in ON position / (It turns ON with disc holder closed.)

S202:

Rest detector switch in OFF position / (It turns ON when optical pick-up comes to innermost periphery.)

S301:

Play/pause (▶ / ▮▮) switch

S302:

Volume control switch (VOL-)

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S303:

Volume control switch (VOL+)

S304:

R.skip/search (**) switch**

S305:

F.skip/search (**) switch**

S308:

Stop/turn off (**) switch**

S310:

Hold (HOLD) switch in OFF position

- Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

- The supply part number is described alone in the replacement parts list.

- Voltage and signal line

: Positive voltage line

: Playback signal line

- Circuit voltage and waveform described herein shall be regarded as reference information when probing defect point, because it may differ from an actual measuring value due to difference of Measuring instrument and its measuring condition andproduct itself.

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Measurement conditions:

- AC adaptor is used for power supply.

- Set the hold switch to ON.

- The parenthesized is the voltage for test disc (1 kHz, L+R, 0 dB) in play mode, and the other, for no disc in stop mode.

Caution!

IC and LSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.
Cover the parts boxes made of plastics with aluminum foil.
Ground the soldering iron.
Put a conductive mat on the work table.
Do not touch the legs of IC or LSI with the fingers directly.

11. Schematic Diagram

12. Printed Circuit Board and Wiring Connection Diagram

13. Block Diagram

14. Terminal Function of ICs

14.1. IC301(C2BBGF000637): / System Control

Pin No.	Terminal Name	I/O	Function
1	FG	I	Pulse input for spindle rotate measurement
2	IDOWN	O	Power control signal output
3	PC1	O	Driver OFF output
4	PC2	O	Driver OFF output
5	ICTRL	O	External battery current control output
6	GUP	O	Headphone output amp signal output
7	CNVSS	-	GND
8	RESET	I	Reset signal input
9	XCOUT	-	Not used, open
10	XCIN	-	Not used, open
11	VSS	-	GND
12	XIN	I	System clock connected terminal
13	XOUT	O	
14	VCC	I	Power supply terminal

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Pin No.	Terminal Name	I/O	Function
15	HPCNT	O	Headphone L ch output control signal output
16	MUTEH	O	Headphone mute ON output
17	BUZ	O	Beep signal output
18	NC	I	Connected to power supply
19	VL2	I	Connected to power supply
20	VL3	-	Connected to GND
21	BLKCK	I	Block clock signal input
22	VL1	-	Connected to GND
23	NC	-	Not used, open
24	NC	-	Not used, open
25	NC	-	Not used, open
26	NC	-	Not used, open
27	NC	-	Not used, open
28	NC	-	Not used, open
29	NC	-	Not used, open
30	NC	-	Not used, open
31	REMOCON	-	Not used, open
32	HIGHMAT	-	Not used, open
33	JACKM2	I	OPT OUT/OUT connection detect signal input
34	JACKM1	I	
35	MUTEL	O	Line out mute signal output
36	TXPOWER	O	Optical digital out ON output
37	NC	-	Not used, open
38	NC	-	Not used, open
39	NC	-	Not used, open
40	LED	O	Charge LED ON output
41	NC	-	Not used, open
42	NC	-	Not used, open
43	NC	-	Not used, open
44	LASEQIC / SEL	I	Not used, connected to GND via resistor
45	KANASEL	-	Not used, open
46	TYPESEL	-	Not used, open
47	XCSEL	I	Not used, connected to GND via resistor
48	XBSSEL	-	Not used, open
49	CHGSEL	I	Not used, connected to GND via resistor
50	CHGSEL3	I	Not used, connected to GND via resistor
51	X3SEL	I	Not used, connected to GND via resistor

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Pin No.	Terminal Name	I/O	Function
52	FSSEL	-	Not used, open
53	NRFDET / SEL	I	Not used, connected to GND via resistor
54	ZANSEL	-	Not used, open
55	REST	I	Rest detect switch signal input
56	PLAY	I	Play key signal input
57	A.SHOCK	-	Not used, open
58	HOLD	I	HOLD switch signal input
59	ZAN/ / JVDGE	-	Not used, open
60	RFOFF	O	Hologram laser power OFF output
61	MLD	O	Serial command latch output
62	CHARGE1	O	Charge ON output
63	CHARGE2	O	PVCC1 voltage up output
64	MCLK/ SK	O	Command/EEPROM clock output
65	MDATA/ / DIDO	O	Command/EEPROM data input/ output
66	STAT	I	Status signal input
67	ECS	O	EEPROM communication select output
68	ACDET	I	AC detect signal input
69	DOT	O	Driver communication output for dot matrix LCD
70	POWER	O	Secondary power ON output
71	AVSS	-	GND
72	VREF	I	Reference voltage input
73	REMKEY	I	Remote control signal input
74	DOCTOR	I	Doctor mode select
75	VMONI / TOR2	I	Battery remaining measurement signal
76	VMONI / TOR1	I	Rechargeable battery voltage detect signal
77	VMONI / TOR3	I	Rechargeable battery remaining measurement signal
78	KEY	I	Operation key signal input
79	NC	-	Not used, open
80	OPEN	I	CD lid open switch input

14.2. IC501(MN6627962JB): / Servo Amp, Servo Processor, Digital Signal Processor, / Digital Filter & D/A Converter

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Pin No.	Terminal Name	I/O	Function
1	A7	O	Address 7 signal output
2	A6	O	Address 6 signal output
3	A5	O	Address 5 signal output
4	A4	O	Address 4 signal output
5	LDQM	O	Lower bite data mask signal output
6	NWE	O	Write enable signal output
7	NCAS	O	CAS control signal output
8	NRAS	O	RAS control signal output
9	CKE	O	Clock enable signal output
10	A3	O	Address 3 signal output
11	A2	O	Address 2 signal output
12	A1	O	Address 1 signal output
13	A0	O	Address 0 signal output
14	REGON	I	Built in regulator control signal
15	DRVDD1	I	Power supply terminal
16	DVDD1	I	Power supply terminal
17	A10	O	Address 10 signal output
18	BA1	O	Bank select signal output 1
19	BA0	O	Bank select signal output 0
20	DVSS1	-	GND
21	PWMSEL	I	PWM output mode select input
22	SPOUT	O	Spindle drive signal output
23	SPPOL	O	Spindle drive signal output
24	TRVP	O	Traverse drive signal output (+)
25	TRVM	O	Traverse drive signal output (-)
26	TRP	O	Tracking drive signal output (+)
27	TRM	O	Tracking drive signal output (-)
28	FOP	O	Focus drive signal output (+)
29	FOM	O	Focus drive signal output (-)
30	IOVDD1	I	Power supply terminal
31	AVDD3	I	Power supply terminal
32	AVSS3	-	GND
33	ADPVCC	I	Power supply voltage monitor signal input
34	TEIN	I	DSP tracking error signal input
35	ATOFS	-	Not used, open
36	FEIN	I	DSP focus error signal input
37	AFOFS	-	Not used, open
38	CEA	I	HPE amp capacitor connect terminal
39	RFENV	O	RF envelope signal monitor
40	FEOUT	O	Focus error signal amp output

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Pin No.	Terminal Name	I/O	Function
41	FEN	I	Focus error signal amp inverting input
42	TEN	I	Tracking error signal amp inverting input
43	TEOUT	O	Tracking error signal amp output
44	VREF	O	VREF output
45	DUTYADJ	I	Laser intermittent drive clock duty adj. / resistor terminal
46	CKMON	-	Not used, open
47	PD	I	APC amp input
48	LD	-	Not used, open
49	VDDDRV	I	Power supply terminal
50	CLD	-	Not used, open
51	VDDLD	I	Power supply terminal
52	E	I	Tracking signal input 1
53	F	I	Tracking signal input 2
54	B	I	Focus signal input 2/RF addition amp / input 2
55	C	I	RF addition amp input 3
56	A	I	Focus signal input 1/RF addition amp / input 1
57	DCDET	I	HPF capacitor connected terminal
58	RFVDD	O	Power supply terminal
59	RFN	-	Not used, open
60	RFOUT	O	RF addition amp output
61	RFIN	I	AGC input
62	CAGC	I	AGC loop filter capacitor connected terminal
63	ARFOUT	O	AGC output
64	AVSS2	-	GND
65	ARFIN	I	RF signal input
66	DSLF	O	Loop filter for DSL
67	IREF	I	Reference current input
68	PLLF	O	Loop filter for PLL
69	PLLFO	O	Loop filter for PLL
70	AVDD2	I	Power supply terminal
71	LOOUTL	O	L ch audio signal output for line out output
72	AVSS1	-	GND
73	AVREF	-	Not used, open
74	LOOUTR	O	R ch audio signal output for line out output
75	AVDD1	I	Power supply terminal

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Pin No.	Terminal Name	I/O	Function
76	HPCNT	I	Headphone control signal input
77	HPVDDL	I	Power supply terminal
78	HPOUTL	O	L ch audio output for headphone
79	HPVSSL	-	GND
80	HPVDDR	I	Power supply terminal
81	HPOUTR	O	R ch audio output for headphone
82	HPVSSR	-	GND
83	NTEST	I	Test mode input
84	DVSS2	-	GND
85	X1	I	Crystal oscillator connected terminal / (F=16.9 MHz)
86	X2	O	
87	IOVDD2	I	Power supply terminal
88	DVDD2	I	Power supply terminal
89	GIO0	-	Not used, open
90	GIO1	I	Connected to power supply via resistor
91	GIO2	-	Not used, open
92	EXT0	O	Extended input/output port (FLOCK)
93	EXT1	O	Extended input/output port (PCK)
94	EXT2	O	Extended input/output port (LD OFF)
95	MCLK	I	Command clock signal input
96	MDATA	I	Command data input
97	MLD	I	Command load input
98	STAT	O	Status signal output
99	BLKCK	O	Sub code block clock signal output
100	SMCK	O	System clock signal output
101	PCMK	-	Not used, open
102	TX	O	Digital audio interface signal output
103	FLAG	-	Not used, open
104	NRST	I	Reset signal input
105	DVDD3	I	Power supply terminal
106	DVSS3	-	GND
107	D2	I/O	Data signal input/output 2
108	D1	I/O	Data signal input/output 1
109	D0	I/O	Data signal input/output 0
110	D3	I/O	Data signal input/output 3
111	D4	I/O	Data signal input/output 4

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Pin No.	Terminal Name	I/O	Function
112	D5	I/O	Data signal input/output 5
113	D6	I/O	Data signal input/output 6
114	D7	I/O	Data signal input/output 7
115	D15	I/O	Data signal input/output 15
116	D14	I/O	Data signal input/output 14
117	DRVDD2	I	Power supply terminal
118	D13	I/O	Data signal input/output 13
119	D12	I/O	Data signal input/output 12
120	D11	I/O	Data signal input/output 11
121	D10	I/O	Data signal input/output 10
122	D9	I/O	Data signal input/output 9
123	D8	I/O	Data signal input/output 8
124	UDQM	O	Higher bite data mask signal output
125	SDRCK	O	Clock signal output
126	A11	O	Address 11 signal output
127	A9	O	Address 9 signal output
128	A8	O	Address 8 signal output

15. Supply of Rechargeable Battery as Replacement Parts

Please take note of the following points relating to Carrying Case to be used for protection of Rechargeable Battery from shorting.

Replacement Parts:

- **Rechargeable Battery (RFKFHFAZ09EM) to be supplied will be provided with Carrying Case.**
- **No replacement parts will be supplied for Rechargeable Battery without Carrying Case.**
- **Replacement parts will be supplied for Carrying Case (RFC0062-X) without Rechargeable Battery.**
- **To your customers, delivery Rechargeable Battery together with Carrying Case to prevent shorting accidents that may occur when Rechargeable Battery is carried about without Carrying Case.**

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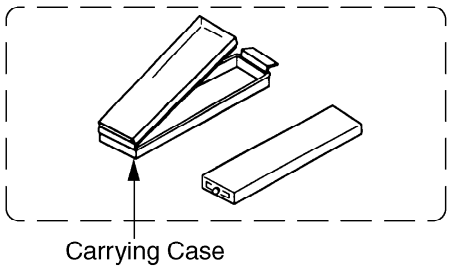
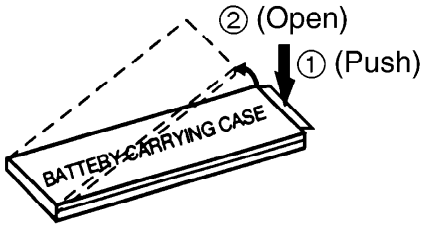
RFKFHFAZ09EM
(Rechargeable Battery with Carrying Case)



16. Caution in use of Rechargeable Battery

- Take Rechargeable Battery out of Carrying Case and use it.

- Be sure to carry Rechargeable Battery in this Carrying Case. / If not, may either heat or ignite by shorting with a metal.



17. Replacement Parts List

Notes:

- Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used.
When replacing any of components, be sure to use only manufactures specified parts shown in the parts list.

- The parenthesized indications in Remarks columns specify the areas and colours.
(GDA): SL-CT720GD, Blue Type
(GDS): SL-CT720GD, Silver Type
(SGA): SL-CT720SG, Blue Type
(SGD): SL-CT720SG, Orange Type
(SGP): SL-CT720SG, Pink Type
(SGS): SL-CT720SG, Silver Type

- The marking [RTL] indicates that retention time is limited for this

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item. After the discontinuation of this assembly in production, it will no longer be available.

- All parts are supplied by SPC.

Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
1	RAE0225Z-M	TRAVERSE DECK UNIT	1	⚠
1-1	RMG0503-K1	FLOATING RUBBER	3	
1-2	RXQ0798-1	TRAVERSE MOTOR	1	
1-3	RAF0223A-2	OPTICAL PICK-UP	1	⚠
1-4	RDG0554	GEAR 1	1	
1-5	RDG0555	GEAR 2	1	
1-6	RHD14092-K	SCREW	1	
1-7	RJB2447A-1	FFC	1	
1-8	RMC0451-1	SPRING PLATE	1	
1-9	XQN17+BG45	SCREW	5	
1-10	RMS0782	DRIVE SHAFT	1	
1-11	L6CAF6DB0001	SPINDLE MOTOR	1	
2	RGN2741-H	NAME PLATE	1	⚠(GDS/GDA)
2	RGN2740-H	NAME PLATE	1	⚠(SGS/SGA/ / SGD/SGP)
3	XTN17+6GFZ	SCREW	6	
4	RJC99048	BATTERY TERMINAL(-)	1	
5	RGV0335-S	KNOB,HOLD	1	
6	RYK1400-S	BOTTOM CABINET	1	(GDS/SGS)
6	RYK1400-A	BOTTOM CABINET	1	(GDA/SGA)
6	RYK1400-D	BOTTOM CABINET	1	(SGD)
6	RYK1400-P	BOTTOM CABINET	1	(SGP)
7	RYF0729-S	CD LID UNIT	1	(GDS/SGS)
7	RYF0729-A	CD LID UNIT	1	(GDA/SGA)
7	RYF0729-D	CD LID UNIT	1	(SGD)
7	RYF0729-P	CD LID UNIT	1	(SGP)
8	RHD14076-S	SCREW	3	
9	RYK1399-S	MIDDLE CABINET	1	(GDS/SGS)
9	RYK1399-1S	MIDDLE CABINET	1	(GDA/SGA/ / SGD/SGP)
10	RMS0853	SHAFT	1	
11	RMR1665-W	LENS	1	
12	RMQ1377-1	HOLDER	1	
13	RME0422	SPRING	1	
14	RME0421	SPRING	1	
15	RME0420	SPRING	1	
16	RMC0608	SPRING	1	
17	RMA1865	SHAFT PLATE	1	
18	RKK0155A-2H	BATTERY LID	1	(GDS/SGS)
18	RKK0155A-1H	BATTERY LID	1	(GDA/SGA/ / SGD/SGP)
19	RJC99047-1	BATTERY TERMINAL / (+/-)	1	
20	RHE5119YA	SCREW	3	
21	RGU2333-W	BUTTON,OPERATION	1	
22	RMR1664-K	LOCK PLATE	1	
23	RMR1663-H	LOCK PIN	1	
24	RGU2334-S	BUTTON,OPEN	1	(GDS/SGS)

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
24	RGU2334-2S	BUTTON,OPEN	1	(GDA/SGA/ / SGD/SGP)
25	RQLS0244	LASER LABEL	1	(SGS/SGA/ / SGD/SGP)
26	RHQ0088-S	SCREW	1	
A1	RFKFHFAZ09EM	RECHARGEABLE / BATTERIES	2	⚠
A2	L0BAB0000190	STEREO EARPHONES	1	
A3	N2QCBD000046	WIRED REMOTE / CONTROL	1	
A4	RFA2666-H	EXTERNAL / BATTERY CASE	1	
A5	RFC0062-X	BATTERY CARRYING / CASE	1	
A6	RFC0071A-C	SOFT CASE	1	
A7	RFEA438Q-S	AC ADAPTOR	1	⚠(GDS/GDA)
A7	RFEA444Z-S	AC ADAPTOR	1	⚠(SGS/SGA/ / SGD/SGP)
A8	RQT7725-Z	OPERATING / INSTRUCTIONS	1	KOREAN
A8	RQT7722-B	OPERATING / INSTRUCTIONS	1	(SGS/SGA/ / SGD/SGP), / ENGLISH
A8	RQT7723-K	OPERATING / INSTRUCTIONS	1	(SGS/SGA/ / SGD/SGP), / CHINESE
A9	K2DA42E00001	POWER PLUG ADAPTOR	1	⚠(SGS/SGA/ / SGD/SGP)
A10	RQCA1146	SHEET(FOR POWER / PLUG ADAPTOR)	1	(SGS/SGA/ / SGD/SGP)
C1	ECUX1H332KBV	50V 3300P	1	
C2	F2G0G471A002	4V 470U	1	
C3-C5	ECJ0EB1C223K	16V 0.022U	3	
C6	ECJ1VF1C104Z	16V 0.1U	1	
C7	ECUE1E682KBQ	25V 6800P	1	ECJ0EB1E682K
C8	ECJ0EB1C223K	16V 0.022U	1	
C11	F3G0G107A002	4V 100U	1	
C13	F3H1A476A001	10V 47U	1	
C15	ECJ1VF1C104Z	16V 0.1U	1	
C17,18	ECJ1VF1C104Z	16V 0.1U	2	
C19	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C20	ECJ1XC1H101K	50V 100P	1	
C54	F1H1A104A028	10V 0.1U	1	
C61	ECJ0EC1H101J	50V 100P	1	
C62	F3F0J226A004	6.3V 22U	1	
C71	F3F0J226A004	6.3V 22U	1	
C72	F1H1A104A028	10V 0.1U	1	
C201	F3F0J226A004	6.3V 22U	1	
C205	ECJ0EB1A104K	10V 0.1U	1	F1G1A104A014
C206	ECJ0EB1C103K	16V 0.01U	1	
C207	F1H0J4750003	6.3V 4.7U	1	
C208	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C301,02	ECJ1VF1A105Z	10V 1U	2	F1H1A1050002
C303	ECJ0EB1H222K	50V 2200P	1	
C304	ECJ1XC1H101K	50V 100P	1	
C306	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C401-03	ECJ1VF1C104Z	16V 0.1U	3	
C404	ECJ1VB1A105K	10V 1U	1	
C405	ECJ1VB1H472K	50V 4700P	1	
C406	F3F1A226A001	10V 22U	1	
C407	F1H1A224A028	10V 0.22U	1	
C412	F1H1A104A028	10V 0.1U	1	
C431	ECJ1VB1H222K	50V 2200P	1	F1H1H222A219

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
C437	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C501,02	ECJ0EC1H150J	50V 15P	2	F1G1H150A469
C504	ECJ1VF1C104Z	16V 0.1U	1	
C505	ECJ1VB1E223K	25V 0.022U	1	F1H1E223A050
C506	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C507	F3G0G107A002	4V 100U	1	
C510	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C513	ECJ1XC1H101K	50V 100P	1	
C515	F1H0J4750003	6.3V 4.7U	1	
C516	ECJ1VB1E223K	25V 0.022U	1	F1H1E223A050
C517	ECJ1VF1A105Z	10V 1U	1	F1H1A1050002
C518	ECJ1XC1H331J	50V 330P	1	F1H1H331A004
C519	ECJ0EC1H181J	50V 180P	1	
C520	ECJ1VB1E223K	25V 0.022U	1	F1H1E223A050
C521	ECUM1E152KBQ	25V 1500P	1	
C522,23	ECJ1VF1A105Z	10V 1U	2	F1H1A1050002
C524	F1G0J105A001	6.3V 1U	1	
C526	ECJ1VF1C104Z	16V 0.1U	1	
C527	ECJ1XC1H101K	50V 100P	1	
C528,29	ECJ1VF1A105Z	10V 1U	2	F1H1A1050002
C531	ECJ1VC1H391J	50V 390P	1	
C532,33	ECJ0EB1H271K	50V 270P	2	
C551,52	ECJ0EB1A104K	10V 0.1U	2	F1G1A104A014
C561	ECJ1VF1C104Z	16V 0.1U	1	
C603,04	ECUM1E562KBQ	25V 5600P	2	
C605,06	F3F1A1060002	10V 10U	2	
C607,08	F1G1H6810002	50V 680P	2	
C610	F3F0J476A001	6.3V 47U	1	
C611	ECJ0EF1C104Z	16V 0.1U	1	F1G1C1040007
C613,14	ECJ0EB1H222K	50V 2200P	2	
C651	ECJ0EB1A104K	10V 0.1U	1	F1G1A104A014
C701	F3H1A227A002	10V 220U	1	
C702	ECJ1VB1A105K	10V 1U	1	
C703,04	ECJ0EF1C104Z	16V 0.1U	2	F1G1C1040007
C705,06	F3G0G2270001	4V 220U	2	
C707	ECJ0EB1H222K	50V 2200P	1	
C708,09	ECJ0EB1H102K	50V 1000P	2	F1G1H102A457
C731	ECJ1VB1H102K	50V 1000P	1	
CN11	RJC99042-1	BATT.TERMINAL	1	
CN101	RJS2A4616T	CONNECTOR(16P)	1	K1MN16B00063
CN401	K1MN08B00063	CONNECTOR(8P)	1	
D1,D2	MA2J72900L	DIODE	2	
D12	MA2J72900L	DIODE	1	
D61	MA2J72900L	DIODE	1	
D71	MA2J72900L	DIODE	1	
D101	MA2J11100L	DIODE	1	
D361	B3AAB0000037	LED	1	
D501	B0JCDD000002	DIODE	1	
D502	MA2J72900L	DIODE	1	
D602	MAZ80560ML	DIODE	1	
D701	MAZ80560ML	DIODE	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
F41	ERY32SB075VA	IC PROTECTOR	1	⚠
IC1	C0DBAFG00014	IC	1	
IC12	C0CBAFD00003	IC	1	
IC61	C0DBAFE00017	IC	1	
IC71	C0CBCBZ00001	IC	1	
IC201	C1BB00000695	IC	1	
IC301	C2BBGF000637	IC	1	
IC302	C3EBCG000096	IC	1	
IC401	C0GBF0000017	IC	1	
IC501	MN6627962JB	IC	1	
IC502	C3ABPG000145	IC	1	
ICP11	K5H1522A0018	IC PROTECTOR	1	⚠
JK11	K2FB3B000003	JK,DC IN	1	
JK12	K2FB2B000003	JK,EXT BATT.	1	
JK601	B3FAZ0000068	OPT OUT/OUT	1	
JK701	K2HC106B0008	JK,HEADPHONE	1	
L1	G1C101MA0035	COIL	1	
L12	RLQU101KT-W	COIL	1	G1C101K00008
L61	G1C101K00033	COIL	1	
L71	G1C331MA0031	COIL	1	G1C331MA0030
L401-03	G1C470MA0107	COIL	3	
L502	G1C101K00033	COIL	1	
L504	G1C101K00033	COIL	1	
L701	J0JBC0000015	COIL	1	
L702,03	J0JBC0000014	COIL	2	
L704	G1C471K00007	COIL	1	
L705	J0JBC0000015	COIL	1	
P1	RPK2188	GIFT BOX	1	(GDS/SGS)
P1	RPK2191	GIFT BOX	1	(GDA/SGA)
P1	RPK2193	GIFT BOX	1	(SGD)
P1	RPK2192	GIFT BOX	1	(SGP)
P2	RPQ1823	PAD	1	(GDS/GDA)
P2	RPQ1824	PAD	1	(SGS/SGA/ / SGD/SGP)
P3	RPF0111-2	SHEET	1	
PCB1	REP3809C-M	P.C.B. ASS'Y	1	[RTL]
Q11	UN5214TX	TRANSISTOR	1	UNR521400L
Q13	B1DFDC000003	TRANSISTOR	1	
Q41	2SB1182TLPQR	TRANSISTOR	1	B1BDND000001
Q42	B1ABMD000004	TRANSISTOR	1	
Q81	2SD1819AWL	TRANSISTOR	1	
Q101	B1CHGD000004	TRANSISTOR	1	
Q301	B1CHGD000004	TRANSISTOR	1	
Q302	UNR511400L	TRANSISTOR	1	
Q304	UN5214TX	TRANSISTOR	1	UNR521400L
Q305	UNR511400L	TRANSISTOR	1	
Q307	DTA143EUA106	TRANSISTOR	1	B1GDCFGG0005

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
Q501	B1CHMC000001	TRANSISTOR	1	
Q502	B1CFHA000001	TRANSISTOR	1	
Q504	UNR511100L	TRANSISTOR	1	
Q505	UN5214TX	TRANSISTOR	1	UNR521400L
Q551	DTA143EUA106	TRANSISTOR	1	B1GDCFGG0005
Q601	B1GFGCAA0001	TRANSISTOR	1	
Q602	UNR511400L	TRANSISTOR	1	
Q704	B1GFGCAA0001	TRANSISTOR	1	
Q705	UN5115TX	TRANSISTOR	1	UNR511500L
Q901	UNR511400L	TRANSISTOR	1	
Q902	UMG6NTR	TRANSISTOR	1	B1GFCFNA0001
Q903	UNR511400L	TRANSISTOR	1	
R1	ERJ2GEJ104	1/16W 100K	1	
R2	ERJ2RHD823	82K	1	
R3	D0YBR0000010	CHIP RING	1	
R4	ERJ2RKD334	330K	1	
R5	ERJ3RED154	150K	1	
R6	ERJ3RBD104	100K	1	
R7	ERJ2GEJ104	1/16W 100K	1	
R8	D0YBR0000010	CHIP RING	1	
R9	ERJ3GEYJ102V	1/10W 1K	1	
R10	ERJ3GEYJ221	1/10W 220	1	
R11	ERJ2GEJ220	1/16W 22	1	
R13	ERJ3GEYJ105V	1/10W 1M	1	
R14	ERJ2GEJ104	1/16W 100K	1	
R16	ERJ3GEYJ100	1/10W 10	1	
R17	ERJ2GEJ104	1/16W 100K	1	
R44	ERJ2GEJ271	1/16W 270	1	
R50	ERJ12YJ1R2U	1/2W 1.2	1	
R52	ERJ2GEJ105	1/16W 1M	1	
R53	ERJ2GEJ104	1/16W 100K	1	
R55,56	ERJ3GEYJ104	1/10W 100K	2	
R57	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R58,59	ERJ2GED563X	1/4W 56K	2	ERJ2RHD563X
R60,61	ERJ3RBD563	1/16W 56K	2	ERJ3RBD563V
R82,83	ERJ3GEYJ123V	1/10W 12K	2	
R201	ERJ2GEJ2R2X	1/16W 2.2	1	ERJ2RMJ2R2X
R202	ERJ2GEJ223	1/16W 22K	1	
R204	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R205	ERJ2GEJ682	1/16W 6.8K	1	
R206	ERJ2GEJ153	1/16W 15K	1	
R207	ERJ3GEYJ103V	1/10W 10K	1	D0GB103JA002
R208	ERJ3GEYJ104	1/10W 100K	1	
R301	ERJ2GEJ392	1/16W 3.9K	1	
R302	ERJ3GEYJ104	1/10W 100K	1	
R304	ERJ3GEYJ105V	1/10W 1M	1	
R306	ERJ3GEYJ181V	1/10W 180	1	
R308	ERJ2GEJ472	1/16W 4.7K	1	
R310	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R311	EXB24V102JX	1K×2	1	
R312	ERJ2GEJ822	1/16W 8.2K	1	
R314	ERJ2GEJ153	1/16W 15K	1	
R315	ERJ3GEYJ102V	1/10W 1K	1	

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Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
R316	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R317,18	ERJ3GEYJ102V	1/10W 1K	2	
R320	ERJ3GEYJ102V	1/10W 1K	1	
R321	ERJ2GEJ104	1/16W 100K	1	
R324	ERJ2RHD273X	1/16W 27K	1	
R325	ERJ3GEYJ333	1/10W 33K	1	
R326	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R329	ERJ2GEJ104	1/16W 100K	1	
R331	ERJ3GEYJ273	1/10W 27K	1	
R341	ERJ3GEYJ104	1/10W 100K	1	
R359	ERJ2GEJ103	1/16W 10K	1	
R371	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R374	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R377	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R397	EXB28V104JX	100K×4	1	
R401	ERJ3GEYJ472	1/10W 4.7K	1	
R405	ERJ3GEYJ473V	1/10W 47K	1	D0GB473JA002
R502	ERJ3GEYJ563	1/10W 56K	1	
R504	ERJ3RBD753	1/16W 75K	1	
R505	ERJ3GEYJ681	1/10W 680	1	
R506	ERJ2GEJ823	1/16W 82K	1	
R507	ERJ2GEJ103	1/16W 10K	1	
R508	ERJ3GEYJ682	1/10W 6.8K	1	
R509	ERJ2GEJ3R3	1/16W 3.3	1	
R511,12	ERJ3GEYJ222	1/10W 2.2K	2	
R513	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R514	ERJ3GEYJ681	1/10W 680	1	
R515	ERJ2GEJ150	1/16W 15	1	
R516	ERJ2GEJ104	1/16W 100K	1	
R517	ERJ3GEYJ101	1/10W 100	1	D0GB101JA002
R518	ERJ2GEJ473	1/16W 47K	1	
R519	ERJ2GE0R00X	1/16W 0	1	
R520	ERJ3GEYJ222	1/10W 2.2K	1	
R521	ERJ2GEJ104	1/16W 100K	1	
R551	ERJ2GEJ102X	1/16W 1K	1	ERJ2RMJ102X
R601	ERJ2GE0R00X	1/16W 0	1	
R602	EXB24V222JX	1/16W 2.2K×2	1	
R603,04	EXB24V271J	270×2	2	
R605	EXB24V473J	47K×2	1	
R607	EXB24V102JX	1K×2	1	
R703,04	ERJ2GEJ4R7X	1/16W 4.7	2	ERJ2RMJ4R7X
R705,06	ERJ2GEJ2R2X	1/16W 2.2	2	ERJ2RMJ2R2X
R707,08	ERJ2GEJ102X	1/16W 1K	2	ERJ2RMJ102X
R709	EXB24V222JX	1/16W 2.2K×2	1	
R901	ERJ3GEYJ222	1/10W 2.2K	1	
R910	ERJ3GEYJ222	1/10W 2.2K	1	
RJ402	ERJ2GE0R00X	1/16W 0	1	
S201	RSH1A039-A	SW,LASER ON/OFF	1	K0L1BA000037
S202	RSP1A024-A	SW,REST DET.	1	K0L1BA000029
S301-05	K0H1BB000072	SW,OPERATION	5	
S308	K0H1BB000072	SW,OPERATION	1	
S310	RSS2A010-1A	SW,HOLD	1	K0D112B00071

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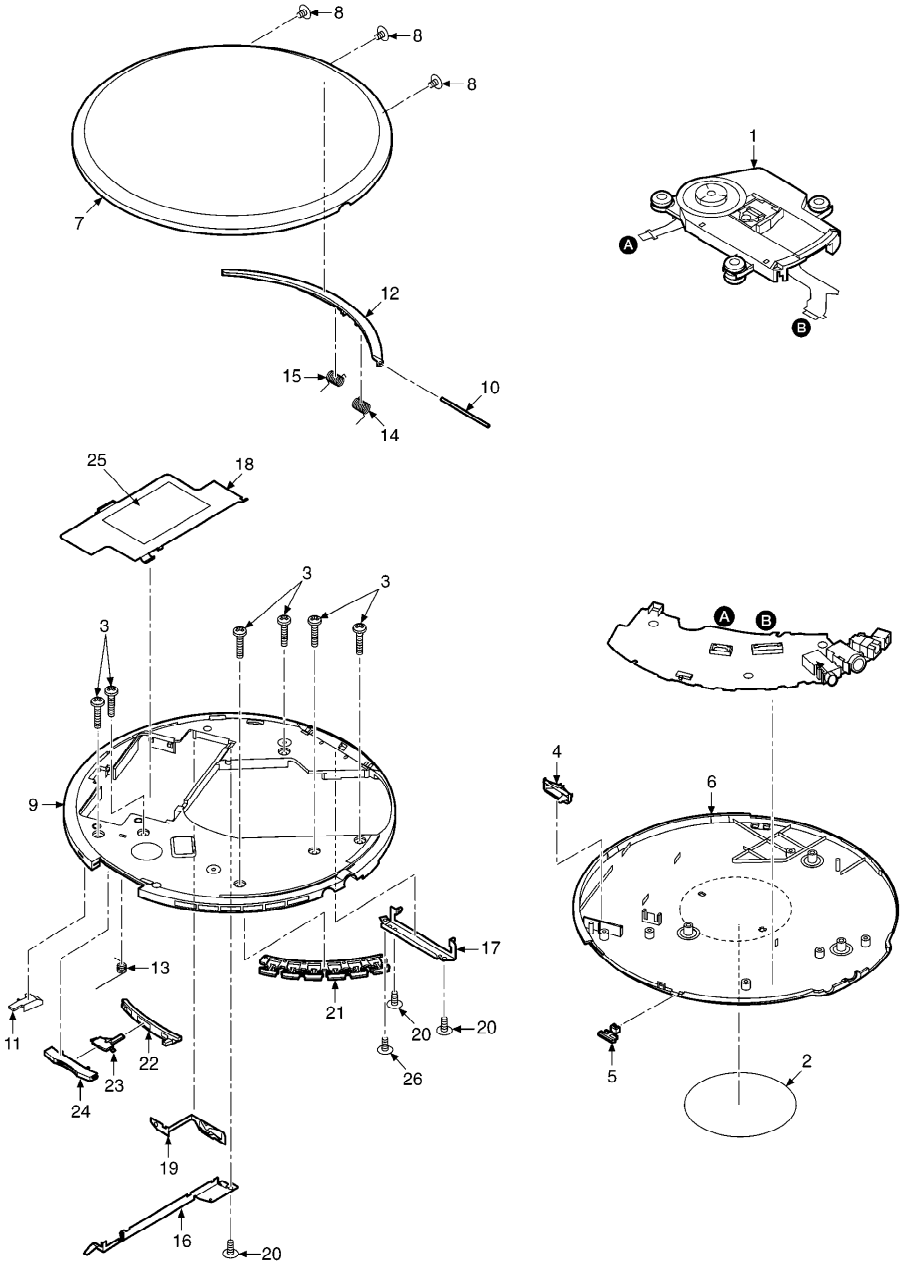
Ref. No.	Part No.	Part Name & Description	Pcs	Remarks
X501	H0J169300002	OSCILLATOR	1	

18. Cabinet Parts Location



19. Traverse Unit Parts Location

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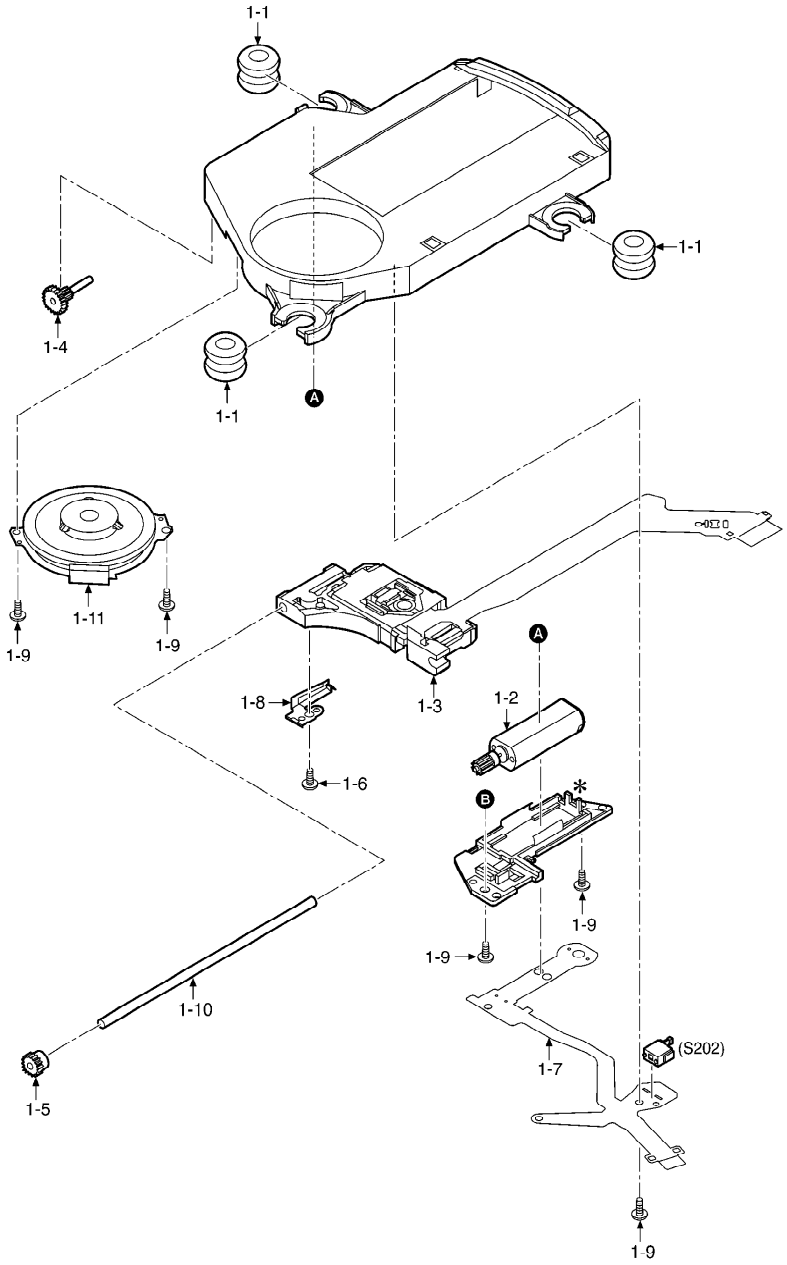

Note : We do not supply those items of parts marked ✻.

20. Packaging

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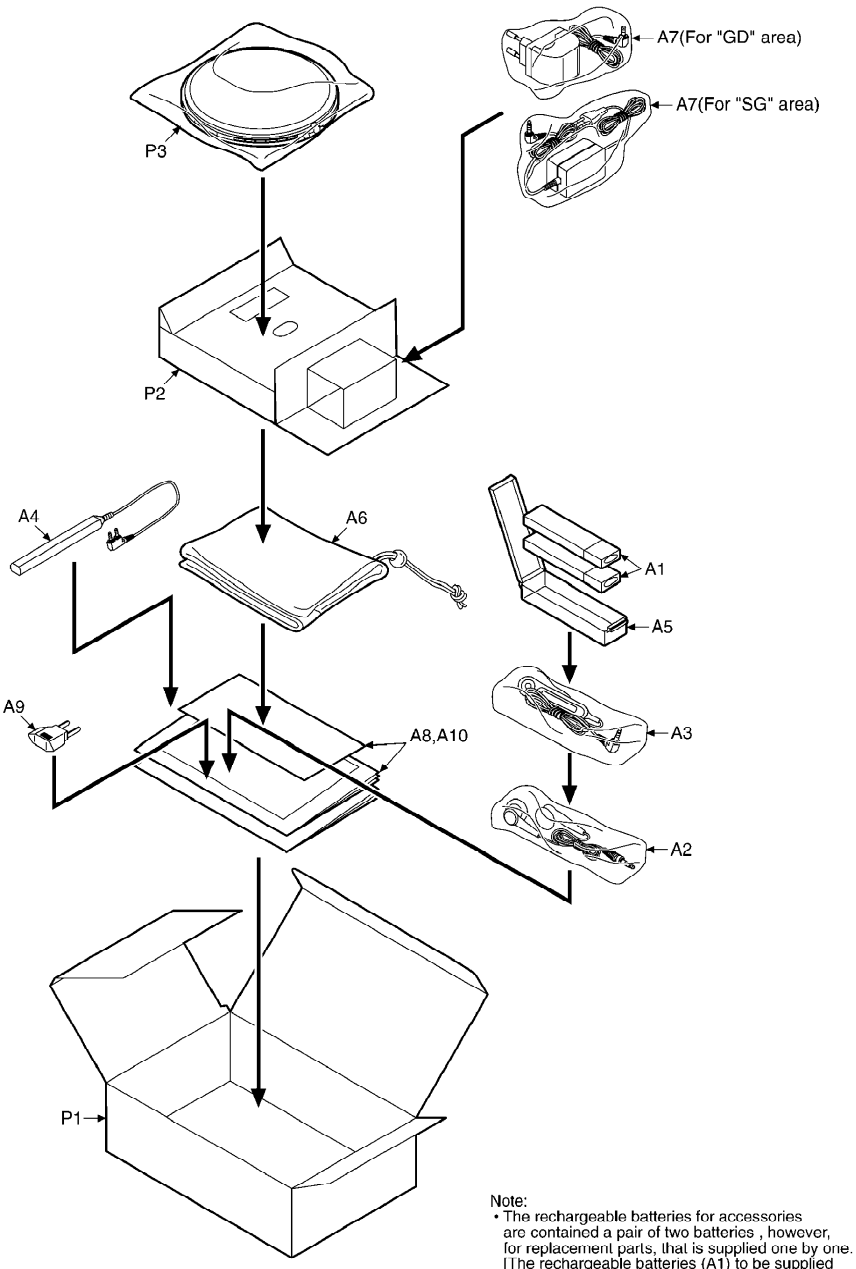

21. Schematic Diagram for printing with letter size

F0409KH

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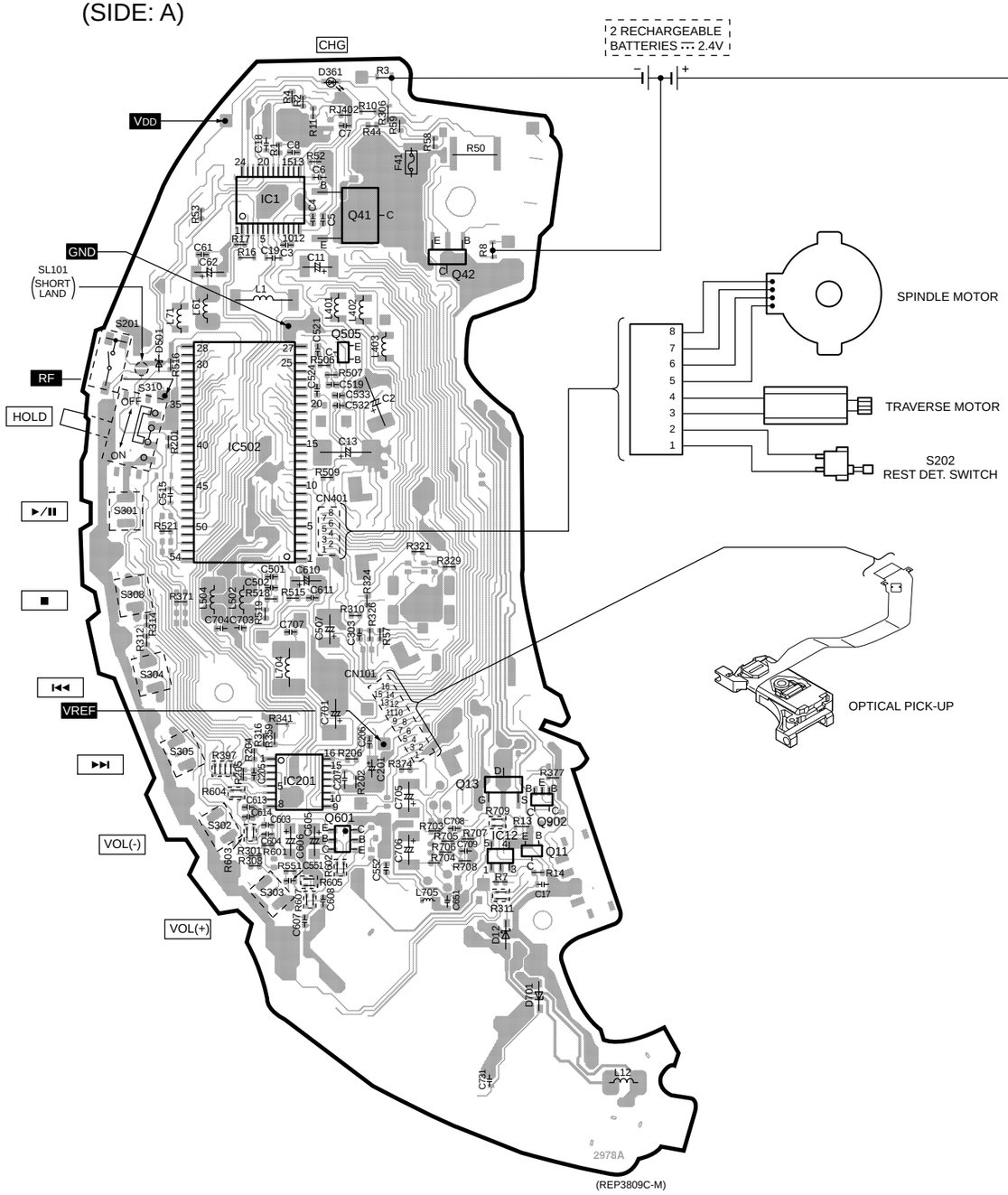
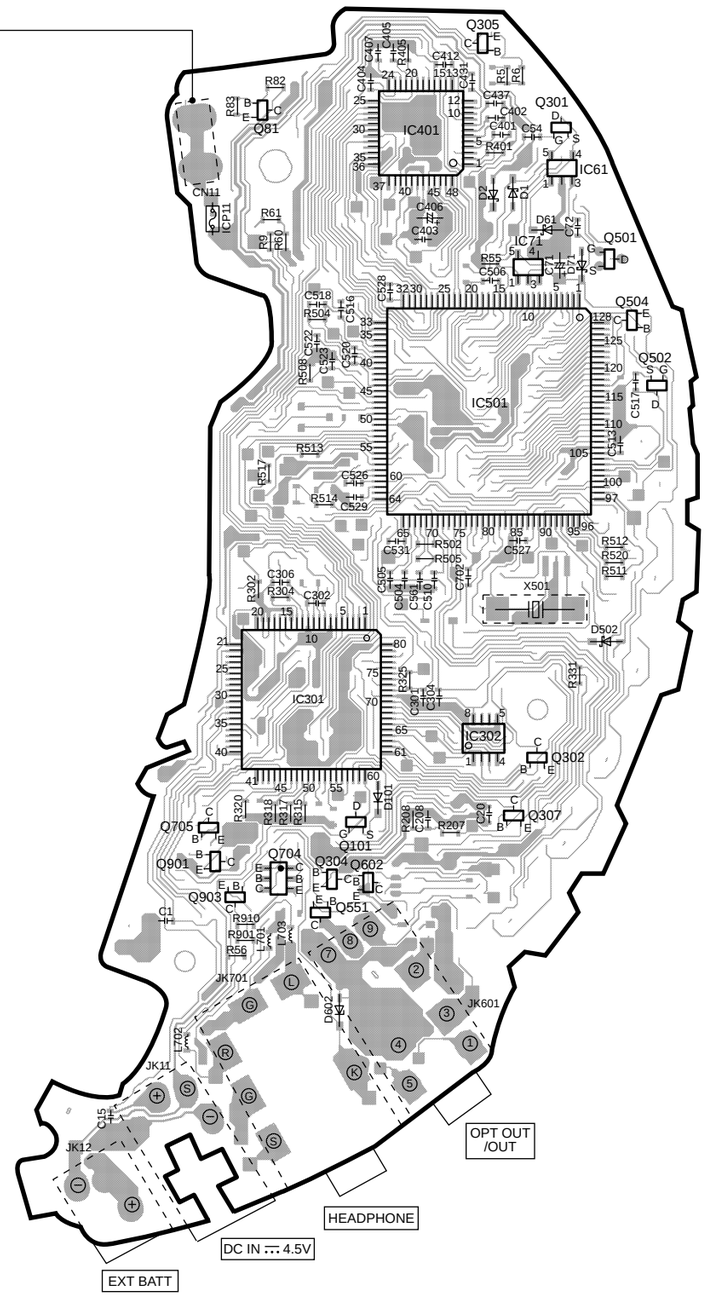
Note: This printed circuit board diagram may be modified at any time with the development of new technology.

(SIDE: A)



(SIDE: B)



SL-CT720(GD,SG) P.C.B.

: POSITIVE VOLTAGE LINE : PLAYBACK SIGNAL LINE

S202 (REST DET.SWITCH)
TRAVERSE MOTOR
SPINDLE MOTOR
CN401
L403 47 μH
L402 47 μH
L401 47 μH

IC401
C0GBF0000017
4ch MOTOR DRIVE

IC201
C1BB00000695
LASER POWER DRIVE

IC301
C2BBGF000637
SYSTEM CONTROL

IC302
C3EBCG000096
EE PROM

Q307
DTA143EUA106
POWER SUPPLY (REMOTE)

Q101
B1CHGD000004
POWER SUPPLY

Q502
2SK1958T1
SWITCHING

Q304
UN5214TX
MUTING CONT.

Q305
UN5114TX
LED DRIVE

D501
B0JCDD000002

D101
MA111TX

D361
B3AAB0000037
(CT-5)

S201 (LASER ON/OFF)
SL101 (SHORT LAND)
S301
S310 (HOLD)

⚠ OPTICAL PICK-UP
TRACKING COIL
FOCUS COIL
CN101

SL-CT720(GD,SG) CIRCUIT DIAGRAM

: POSITIVE VOLTAGE LINE : PLAYBACK SIGNAL LINE

IC501
MN6627962JB
SERVO AMP/SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER & D/A CONVERTER

IC502
C3ABPG000145
64M SDRAM

Q505
UN5214TX
POWER SUPPLY
CONT.

Q504
UN5111TX
POWER SUPPLY

X501
(16.9344MHz)

D502
MA729TX

VREF

RF

SL-CT720(GD,SG) CIRCUIT DIAGRAM

: POSITIVE VOLTAGE LINE : PLAYBACK SIGNAL LINE

Q41
2SB1182TLPQR
REGULATOR

Q501
B1CHMC000001
POWER SUPPLY CONT.

IC1
C0DBAFG00014
DC-DC CONVERTER

F41
ERY32SB075VA

D1
MA729TX

D2
MA729TX

L1
100 μ H

Q301
B1CHGD000004
SWITCHING

IC61
C0DBAFE00017
REGULATOR

D61
MA729TX

L61
100 μ H

IC71
C0CBCBZ00001
REGULATOR

D71
MA729TX

L71
330 μ H

Q302
UN5114TX
SWITCHING(CHARGE)

Q81
2SD1819ATX
SWITCHING(CHARGE)

Q42
B1ABMD000004
SWITCHING(CHARGE)

IC12
C0CBAFD00003
BATTERY LOSS CANCEL

Q11
UN5214TX
BATTERY LOSS CANCEL

Q13
XP161A1355PR
BATTERY LOSS CANCEL

D12
MA729TX

JK11
DC IN 4.5V

JK12
EXT BATT

ICP11
K5H1522A0018

2 RECHARGEABLE BATTERIES 2.4V

Q551
DTA143EUA106
POWER SUPPLY (OPTICAL)

JK601
OPT OUT/ OUT

Q601
B1GFGCAA0001
MUTING

Q602
UN5114TX
MUTING CONT.

Q705
UN5115TX
MUTING CONT.

Q901
UN5114TX
MUTING CONT.

Q902
UMG6NTR
MUTING CONT.

Q903
UN5114TX
BUZZER DRIVE

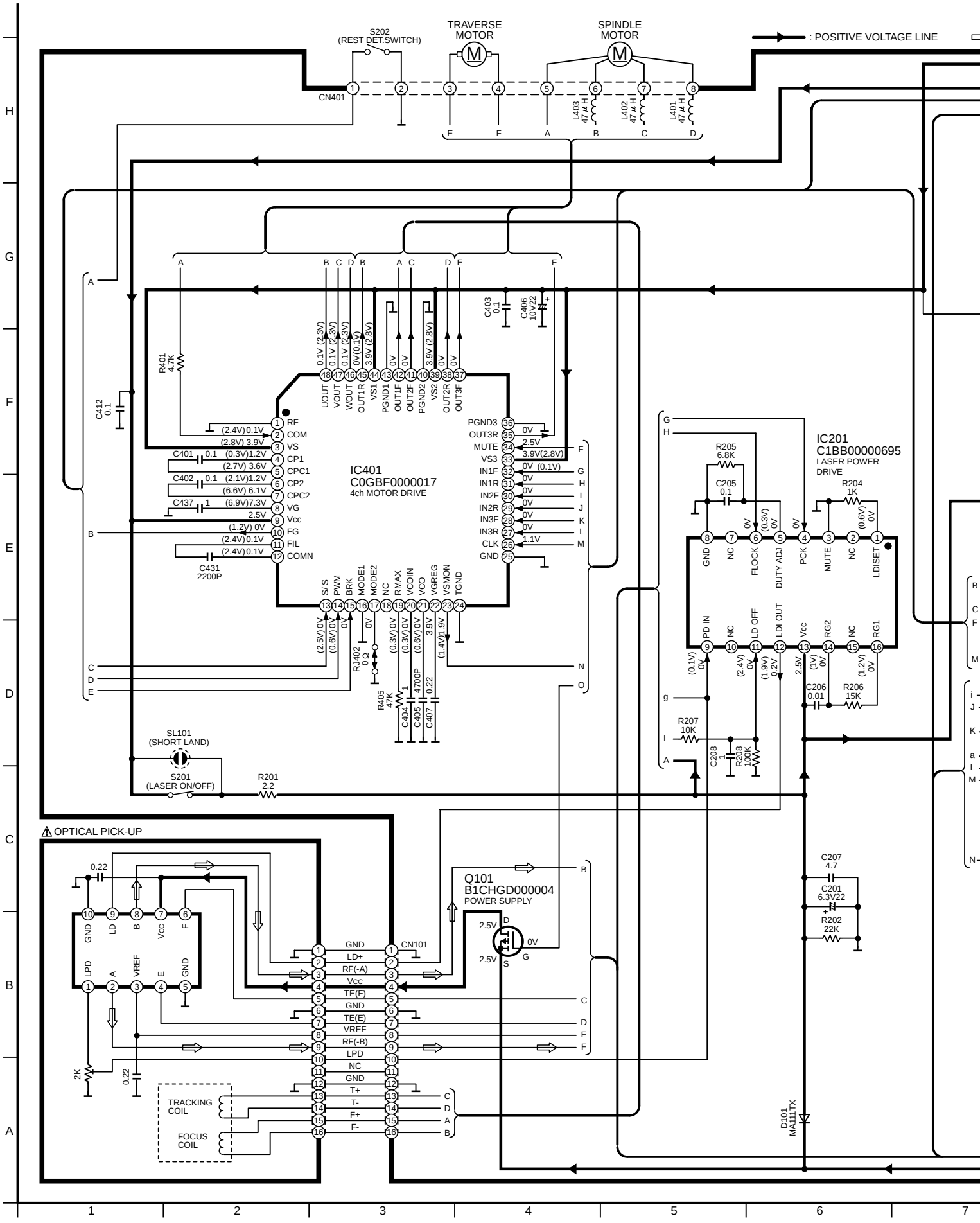
Q704
B1GFGCAA0001
MUTING

D602
MA8056MTX

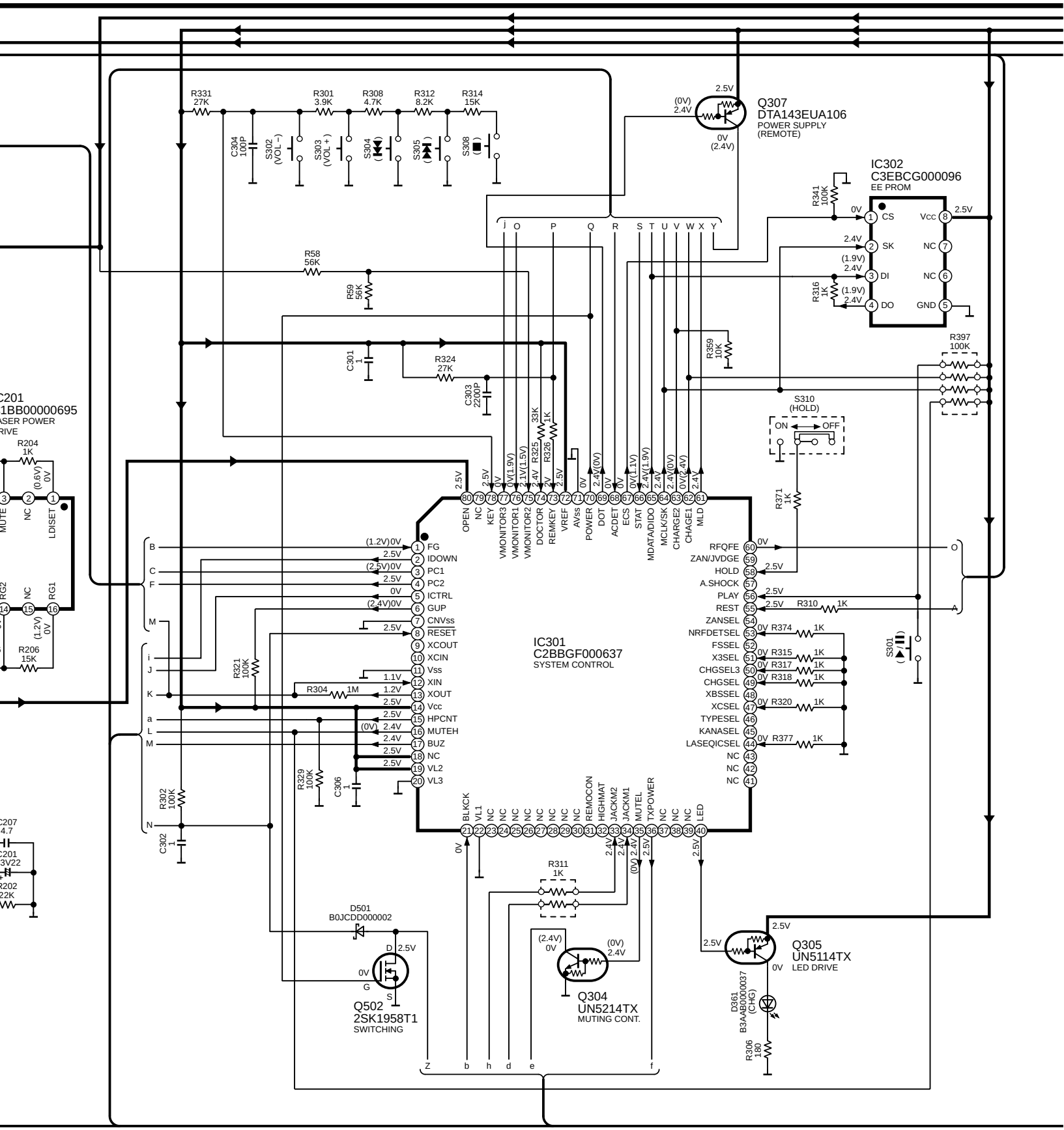
D701
MA8056MTX

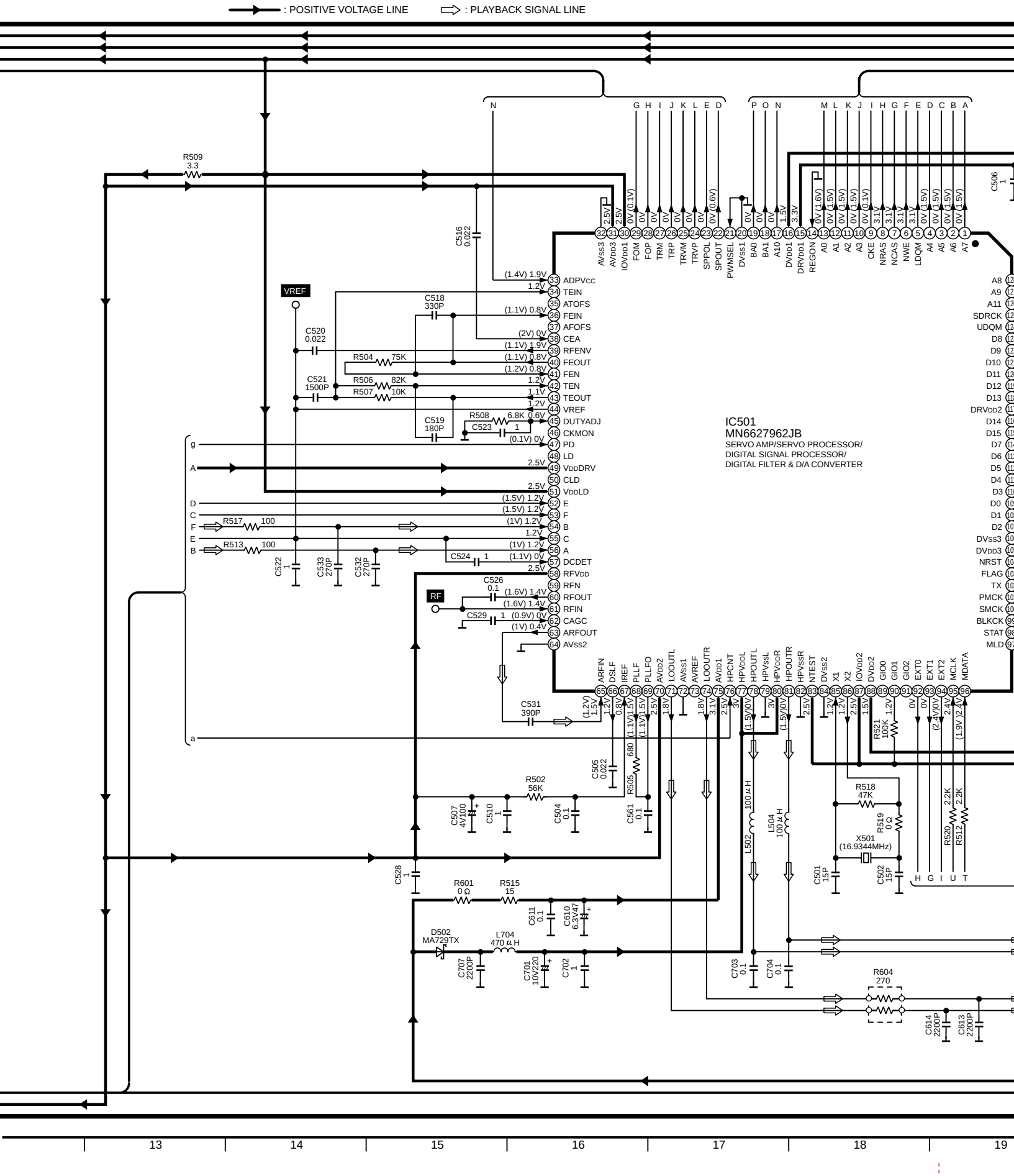
JK701
HEADPHONE

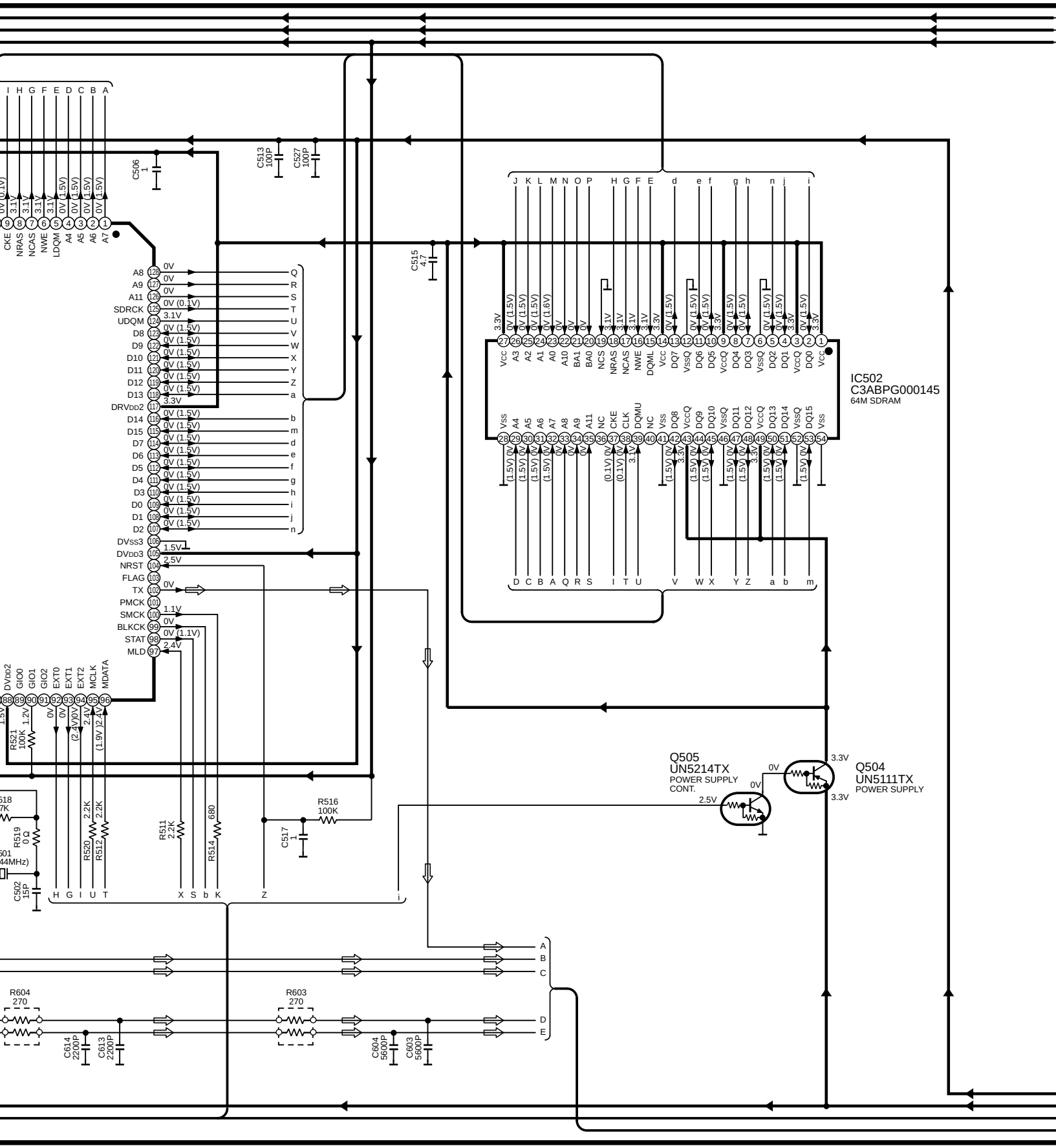
SL-CT720(GD,SG) CIRCUIT DIAGRAM

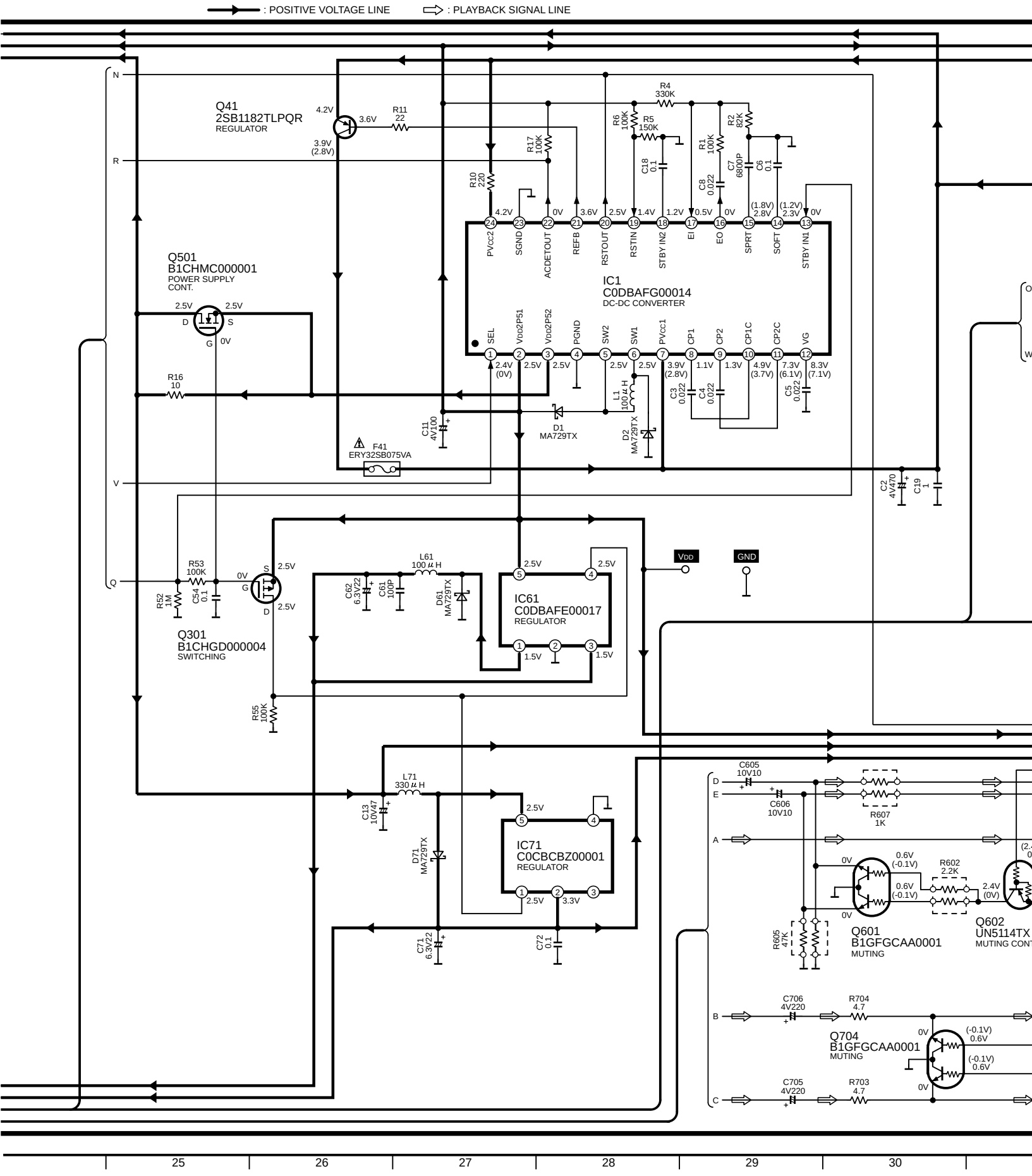

: POSITIVE VOLTAGE LINE
S202
(REST DET.SWITCH)
TRAVERSE MOTOR
SPINDLE MOTOR
CN401
L403 47 μ H
L402 47 μ H
L401 47 μ H
IC401
C0GBF0000017
4ch MOTOR DRIVE
IC201
C1BB00000695
LASER POWER DRIVE
SL101
(SHORT LAND)
S201
(LASER ON/OFF)
OPTICAL PICK-UP
Q101
B1CHGD000004
POWER SUPPLY
CN101
TRACKING COIL
FOCUS COIL
D101
MA111TX

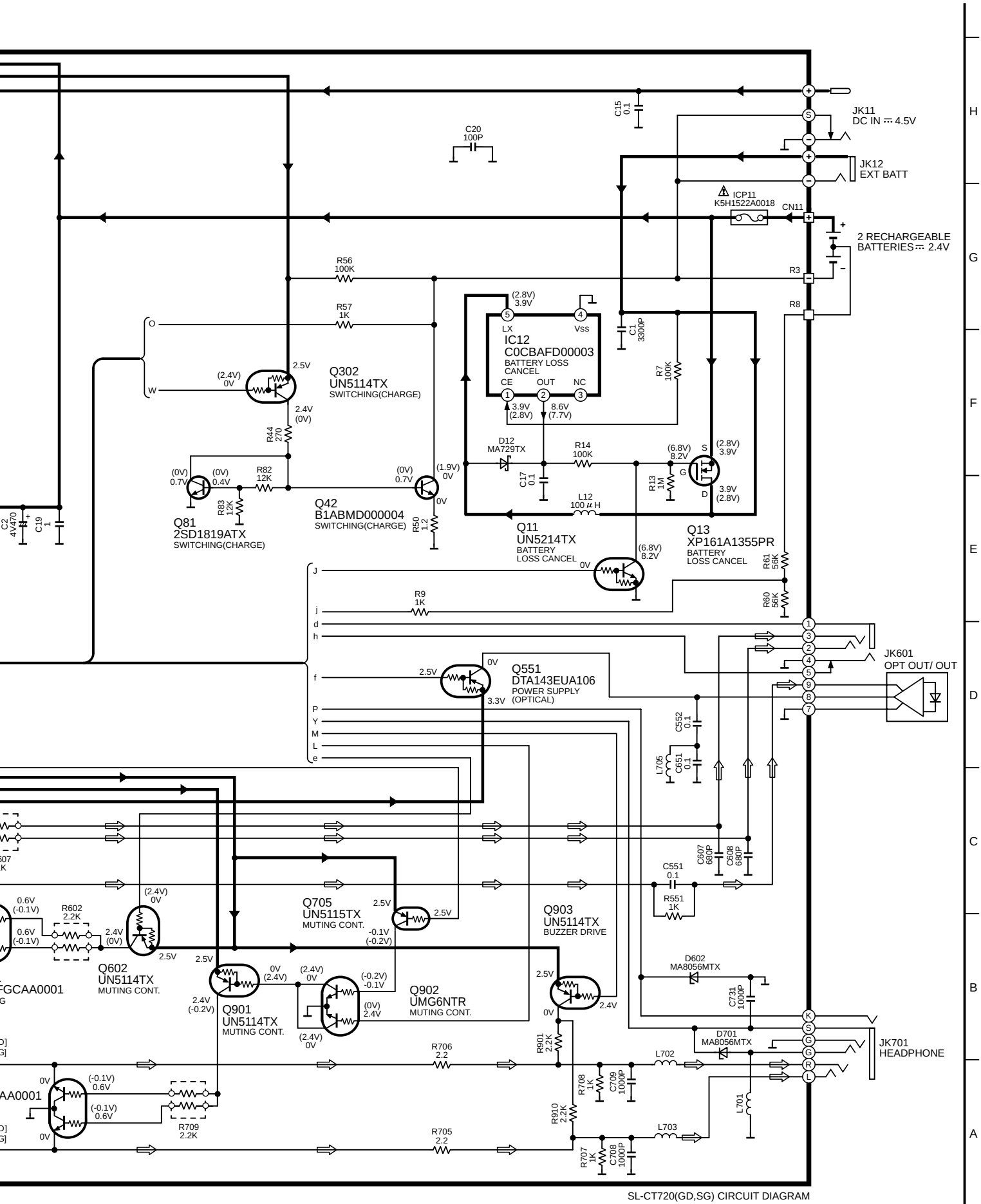
OSITIVE VOLTAGE LINE ⇨ : PLAYBACK SIGNAL LINE




: POSITIVE VOLTAGE LINE
: PLAYBACK SIGNAL LINE
IC501
MN6627962JB
SERVO AMP/SERVO PROCESSOR/
DIGITAL SIGNAL PROCESSOR/
DIGITAL FILTER & D/A CONVERTER
VREF
RF
ADPVCC
TEIN
ATOFS
FEIN
AFOFS
CEA
RFENV
FEOUT
FEN
TEN
TEOUT
VREF
DUTYADJ
CKMON
PD
LD
VDDDRV
CLD
VDDLD
E
F
B
C
A
DCDET
RFVDD
RFN
RFOUT
RFIN
CAGC
ARFOUT
AVSS2
ARFIN
DSLF
IREF
PLLF
PLLFO
AVDD2
LOOUTL
AVSS1
AVREF
LOOUTR
AVDD1
HPCNT
HPVDDL
HPOUTL
HPVSSL
HPVDDR
HPOUTR
HPVSSR
NTEST
DVSS2
X1
X2
IOVDD2
DVDD2
GIO0
GIO1
GIO2
EXT0
EXT1
EXT2
MCLK
MDATA
AVSS3
AVDD3
IOVDD1
FOM
FOP
TRM
TRP
TRVM
TRVP
SPOUT
SPOUT
PWMSEL
DVSS1
BA0
BA1
A10
DVDD1
DRVDD1
REGON
A0
A1
A2
A3
CKE
NRAS
NCAS
NWE
LDQM
A4
A5
A6
A7
A8
A9
A11
SDRCK
UDQM
D8
D9
D10
D11
D12
D13
DRVDD2
D14
D15
D7
D6
D5
D4
D3
D0
D1
D2
DVSS3
DVDD3
NRST
FLAG
TX
PMCK
SMCK
BLKCK
STAT
MLD
R509 3.3
C516 0.022
C518 330P
C520 0.022
R504 75K
C521 1500P
R506 82K
R507 10K
C519 180P
R508 6.8K
C523 1
R517 100
R513 100
C522 1
C533 270P
C532 270P
C524 1
C526 0.1
C529 1
C531 390P
C505 0.022
R505 680
R502 56K
C507 4V100
C510 1
C504 0.1
C561 0.1
C528 1
R601 0Ω
R515 15
C611 0.1
C610 6.3V47
D502 MA729TX
L704 470μH
C707 2200P
C701 10V220
C702 1
L502 100μH
L504 100μH
C703 0.1
C704 0.1
R604 270
C614 220P
C613 2200P
R521 100K
R518 47K
R519 0Ω
R520 2.2K
R512 2.2K
X501 (16.9344MHz)
C501 15P
C502 15P
C506 1


IC502
C3ABPG000145
64M SDRAM
Q505
UN5214TX
POWER SUPPLY
CONT.
Q504
UN5111TX
POWER SUPPLY
C506 1
C513 100P
C527 100P
C515 4.7
R516 100K
R511 2.2K
R520 2.2K
R512 2.2K
R514 680
C517 1
R521 100K
R519 0 Ω
C502 15P
R604 270
R603 270
C614 2200P
C613 2200P
C604 5600P
C603 5600P

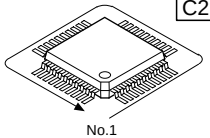

: POSITIVE VOLTAGE LINE
: PLAYBACK SIGNAL LINE
Q41
2SB1182TLPQR
REGULATOR
Q501
B1CHMC000001
POWER SUPPLY
CONT.
IC1
C0DBAFG00014
DC-DC CONVERTER
PVCC2
SGND
ACDETOUT
REFB
RSTOUT
RSTIN
STBY IN2
EI
EO
SPRT
SOFT
STBY IN1
SEL
VDD2P51
VDD2P52
PGND
SW2
SW1
PVCC1
CP1
CP2
CP1C
CP2C
VG
F41
ERY32SB075VA
D1
MA729TX
D2
MA729TX
Q301
B1CHGD000004
SWITCHING
IC61
C0DBAFE00017
REGULATOR
IC71
C0CBCBZ00001
REGULATOR
VDD
GND
Q601
B1GFGCAA0001
MUTING
Q602
UN5114TX
MUTING CONT
Q704
B1GFGCAA0001
MUTING
25
26
27
28
29
30



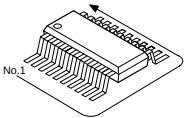
SL-CT720(GD,SG) CIRCUIT DIAGRAM

30 31 32 33 34 35 36

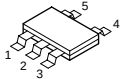
MN6627962JB	128PIN
C0GBF0000017	48PIN
C2BBGF000637	80PIN



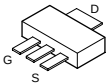
C1BB00000695	16PIN
C0DBAFG00014	24PIN
C3EBCG000096	8PIN
C3ABPG000145	54PIN



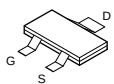
C0CBAFD00003
C0DBAFE00017
C0CBCBZ00001



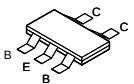
XP161A1355PR



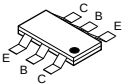
2SK1958T1
B1CHMC000001
B1CHGD000004



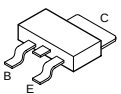
UMG6NTR

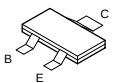


B1GFGCAA0001



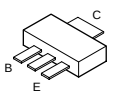
2SB1182TLPQR



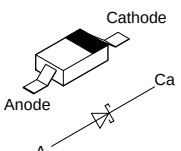


2SD1819ATX
DTA143EUA106
UN5214TX
UN5115TX
UN5111TX
UN5114TX

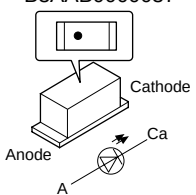
B1ABMD000004



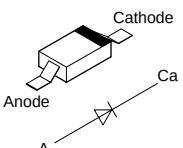
MA729TX



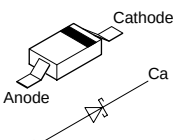
B3AAB0000037



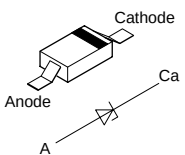
MA111TX

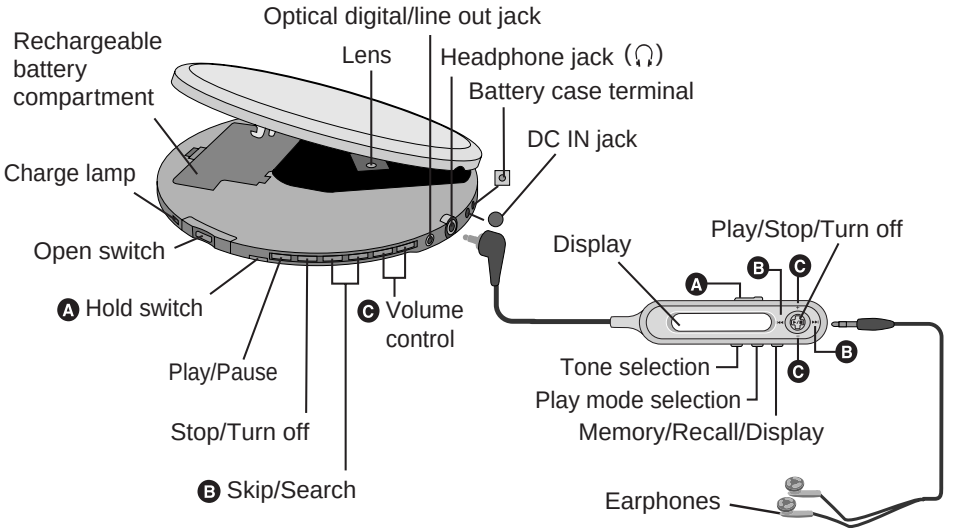


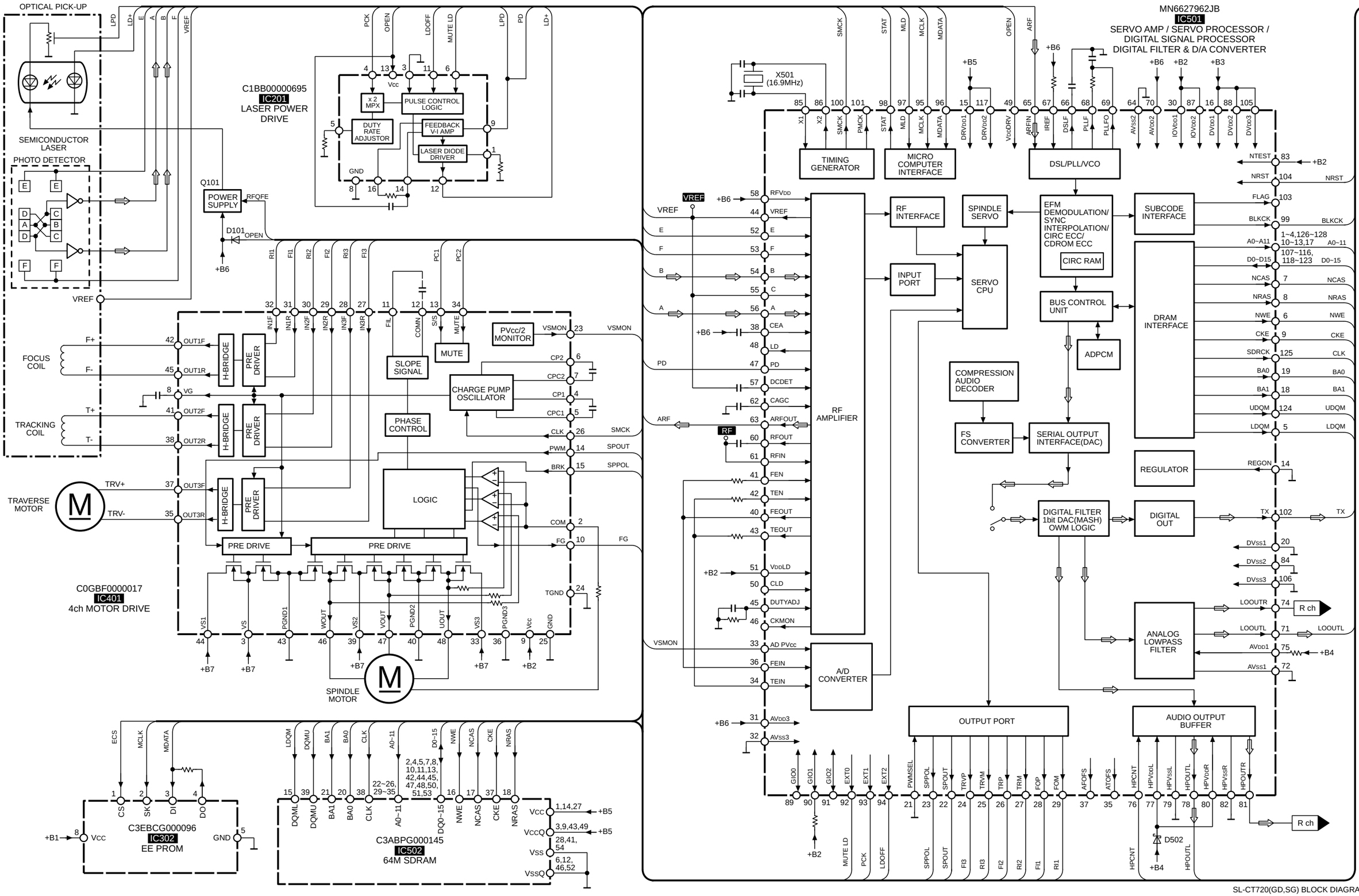
B0JCDD000002



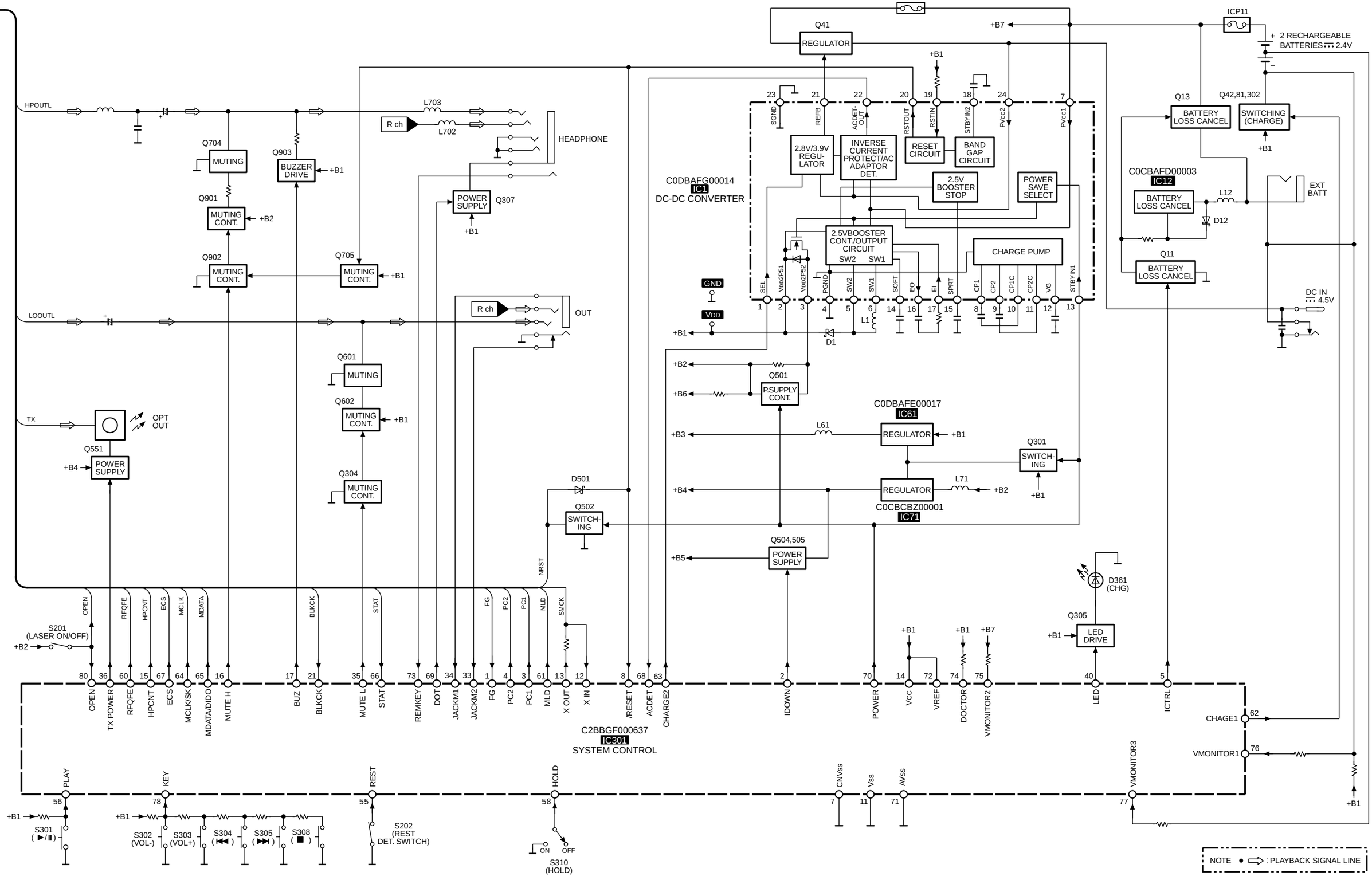
MA8056MTX




Optical digital/line out jack
Rechargeable battery compartment
Lens
Headphone jack (∩)
Battery case terminal
DC IN jack
Charge lamp
Open switch
Display
Play/Stop/Turn off
A
B
C
A Hold switch
C Volume control
Play/Pause
Stop/Turn off
B Skip/Search
Tone selection
Play mode selection
Memory/Recall/Display
Earphones



SL-CT720(GD,SG) BLOCK DIAGRAM



SL-CT720(GD,SG) BLOCK DIAGRAM